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**AN INTRODUCTION  
TO JOURNALISM RESEARCH**

**JOURNALISM MONOGRAPHS  
NUMBER FOUR**

# **JOURNALISM MONOGRAPHS**

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**NATIONAL COUNCIL ON RESEARCH**

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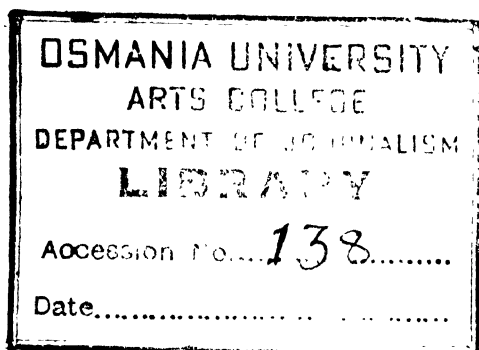
# JOURNALISM RESEARCH

*Edited by*

Ralph O. Nafziger

*and*

Marcus M. Wilkerson



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# Introduction

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Journalism research or the systematic study of mass communication is an ever evolving and progressing field of activity. It cannot be content with descriptions or explanations of how things are done or how press, radio, and film operate. It includes historical studies, it examines critically the social as well as the market value of communication services and practices, and it explores the relationship of communication media with many other fields of study.

Do the agencies of mass communication such as the press and radio meet today's social demands? What precisely makes up the content of the media? Who owns and controls the channels of information, and how efficiently and effectively are they operated? What is the public's response to the contents of the media and what are the effects on the public of media content?

These are some of the questions which concern the public as well as the student. The public wants to know more about the functions, content and influence of the mass media. Scholars and government agencies are expanding their observations and investigations of the competency with which the media are doing their jobs. They are im-

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pressed with the force for good and evil which these media exert in the modern world, and the extent to which the media help society to know itself and to see itself clearly. Owners and managers of press, radio and motion pictures are no less interested in appraisals of the job they are doing.

These problems and these questions are, then, a challenge and a stimulus to the student of journalism. This is peculiarly his field of study. It is a specialty in which he should continue to make important contributions, not only to meet the need for technical improvements within the media organization, but also to meet the needs and desires of the public. It is an expanding field of learning which embraces all mass media and their relationship to public opinion and statecraft.

Much has already been done in accumulating and analyzing facts about the press and the new forms of communication agencies. Historical studies have illuminated and given depth to the study of journalism. They have been expanded to include the study of propaganda, censorship, public opinion and international news communications. Innumerable investigations have been made to find out how the media carry on their operations and how they have met their obligations to the public. Files of the *Journalism Quarterly*, the *Public Opinion Quarterly*, and journals dealing with research in psychology and the social sciences show the current preoccupation of scholars with the study of mass media. The annual releases of *Research in Progress* by the Council on Research of the Association of Accredited Schools and Departments of Journalism are an index to the scope of media studies in recent years.

But perhaps the most significant development in the



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study of journalism has been recent progress in the use of new methods and research tools. Journalism has profited with other disciplines by one of the great modern advances in the field of learning: the invention and adoption of more precise means of studying human behavior in all of its manifestations. Application of the experimental method and the various quantitative methods to communications research has opened up many fertile fields of investigation. Psychology has moved from reliance on speculation and intuition toward adoption of the methods of experimental science. Sociology and economics have struck out in the direction of more intelligent and more precise methods of study. Political science, anthropology and other social sciences have been swept along in the prevailing currents of research method.

Journalism has been undergoing the same evolution. Quantitative research in journalism that has centered around analyses of media content and responses to symbols is an initial step in the development of a science of communications. It is already providing an outlet for specialists in media research.

At the same time journalism has profited by a bridging of gaps between it and the social and natural sciences. It has developed from a preoccupation with tools of a craft to join in an integrated study of human behavior.

This stimulating advance into broader fields of study has affected the practice of journalism as well as teaching and research in journalism schools. That competent editorial writers are tempted to avoid abusive and wordy essays and to give more attention to an analysis of public issues is shown by their day-to-day output and their testimony at press meetings. So, also, one finds evidence that

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reporters and editors, aside from the leaders in their ranks, have become aware of the advances which have been made recently in the art of interviewing, in means of improving the readability of newspaper articles and in the display of the news. Advertising men have been foremost in the quest for more reliable means of measuring the effectiveness of their messages to the public and clearer insight into the impact of their work on society. Publishers and radio men are inclined to appraise themselves and to scrutinize more carefully than ever before the content and form of their output. They are enlisting the aid of research specialists in an effort to substitute research facts for guesswork.

In practice and in its research, then, journalism as well as the social sciences have become engrossed in the application of the scientific method to their problems. The question is: What are the sciences contributing to the media field? How can journalism go along with science? How can science help journalism to improve its methods and practices?

That we are now asking these questions is indicative of the new paths into which journalism research is leading. It shows that in the development of media research we have gradually passed through the usual stages of an investigative method: (1) Gathering of facts, investigation by observation and experiment; (2) formulation of theories to explain the data; (3) analysis of the material; (4) testing the theory or verifying the data. Implied in the method also is the principle that no aspect of the media field is out of bounds for research workers; no social or material problems are strictly confined to such provinces as law and authority and therefore exempt from investigation. Moreover, the results of research are always tenta-

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tive, subject to reappraisal and change, capable of being repeated by anyone, never final and never arbitrarily imposed as the last word to end all investigations. Thus the right to freedom of press and speech, for example, is a corollary to the right to conduct research. The challenge to investigate such concepts as free speech and press freedom and to dispel ignorance about their meanings must be accepted by the student of mass media of communications.

Research is, moreover, an inseparable part of the educational process in journalism. Results attained through research are transmitted to students, and are clarified and given additional meaning by being brought to the attention of students in the classroom and reflected in the revision of textbooks. There can be no up-to-date teaching unless research continues to expand and sharpen subject matter. There can be no enrichment of subject matter for teaching or practice unless students, including prospective research men, are exposed to research method and the results of research. What the student has learned of research in his major field and in related subjects will be revealed in his work after he has completed his academic training and has started his career in mass communications.

As a part of its function to stimulate interest in all of these aspects of research, the Council on Research in Journalism of the Association of Accredited Schools and Departments of Journalism prepared this volume. It is in line with the aims of the Council to promote and to extend the application of sound research methods to the study and practice of journalism. The Council hopes that it will give university administrations, research foundations and the public a better understanding of research accomplishments of the journalism schools. More adequate financing of

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journalism research will be forthcoming only if the journalism schools continue to offer proof in the form of completed studies that they are doing sound research.

Teachers who are actively engaged in research have contributed essays to this volume dealing with their special fields of interest. These essays do not pretend to cover all media fields or all of the methods that are being used in the schools of journalism. Moreover, the emphasis on research methods, particularly the measurement techniques, does not imply that creative writing or other aspects of journalism are unimportant or unworthy of discussion. This emphasis does not ignore the fundamental importance of human and social values that cannot be assessed merely by gathering and measuring facts. The monograph simply has been limited to a restricted field. It is a pathfinder survey which suggests areas and methods of study, trends and possibilities for future research. Each chapter can be a guidepost prompting students to train themselves further in the background and methods which competent investigative work in the field requires. None of the chapters is a complete how-it-can-be-done explanation of the subject matter. In time each contribution might well be expanded into a separate monograph, offering more complete treatment of each topic. For the present, this volume will serve its purpose if it suggests fields of study and stimulates graduate students and journalism teachers to action.

Throughout the volume certain assumptions and objectives are repeated:

1. The teaching of journalism is no longer a mere step-child of any art or discipline. It deals specifically with basic channels of information to the public. It is, however, a part of a broad area of public affairs and a world

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of action that demands a consideration of the contributions which the media are making to human living. The media of communication cannot be studied without reference to the public and its problems.

2. New obligations have been imposed on these media by the forces which have drawn peoples of the world into closer contact with one another. The demand that more "balanced streams of information" should be reaching the public calls for a broadened viewpoint among students and craftsmen who heretofore may have occupied their minds largely with the tools and techniques of a craft. Furthermore, the American people within recent decades have become better educated, better informed, more eager to know "by what authority" statements and assertions appear in the mass media. The times require a broad outlook on what constitutes the field of study and the problems in journalism.

In the modern world, therefore, students of journalism are called upon to consider what objectives press and radio must meet, what these and other media must know about themselves, and by what means they can appraise and improve themselves.

The test of the value of studies that attempt to answer these questions is their practicality or usefulness to the media and to society, for research cannot be separated from the human beings who operate or who are affected by the media. The research worker must know what he is doing, why he is doing it, and how it can be done.

Media research is not restricted to setting up experiments. Careful observation and analysis of "experiments" going on year by year before our eyes will continue to be the bases of fruitful investigations. What press and radio

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are doing day by day, how they do their jobs, and what the effects of their operations are will occupy the lifetime of many students. The tasks awaiting the investigator of historical and contemporary materials are here today in abundance.

In this monograph specialists have reported on selected fields of study and research methods. Thus, (1) historical research continues to supply the necessary background and pattern for the study and analysis of media. The chapter on (2) the law of the press opens up intriguing and important questions concerning the effects of government regulations on the media. The discussion of (3) statistics demonstrates the encroachment of scientific measurement and analysis on the art of journalism. The description of advances which have been made in our knowledge of (4) interviewing as a tool should be thought-provoking, not only to research workers but also to reporters and teachers of reporting. The consideration of (5) media content analysis points to specific applications of measurement devices to the study of journalism. Similarly the chapter on (6) experimental methods attempts to show the possibilities of a relatively new approach to media research problems.

As these methods are brought to bear on the field of communications, journalism will be constantly looking forward to an intelligent use of the privileges which have been granted to the media and to the role of press and radio as important contributors to human living and understanding.

# 1. History and Journalism Research

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## THE SIGNIFICANCE OF JOURNALISM HISTORY

The importance of the study of history has been recognized from the beginning of formal education. So much significance is attached to the subject by thinkers today that many, like John Dewey, hold that we must look in the stream of history to find the meaning of any human endeavor. Even a writer of such widely different views as the Indian philosopher, Radhakrishnan, believes that "a human being is not an abstract entity, a mere mind or mechanism, but a product of history, with his roots in a long racial, social and ancestral past. History makes him what he is and determines his way of approach."

The history of journalism has a special importance as an aspect of history. The printed word has been a force in shaping the entire structure of modern civilization. The invention of movable metal-cast type, followed by the rapid diffusion of the art of printing over the continent of Europe, is generally credited with bringing about the religious revolts of the sixteenth century, out of which emerged the modern era. The press was a vital factor in all of the great political and social struggles which followed.

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The press, particularly the newspaper, is inseparably identified with the rise of democracy and has been a leader in the fight for freedom of expression, which is a basic tenet of democracy.

Aside from its power as a crusading influence, the press has been a most important medium in the formation of public opinion, serving as an open forum in which serious questions have been discussed and decided. Particularly has the free press been an indispensable factor in democratic government, so indispensable that Thomas Jefferson was moved to write: "But the only security of all, is in a free press. The force of public opinion cannot be resisted, when permitted freely to be expressed. The agitation it produces must be submitted to. It is necessary to keep the waters pure."

The press could not have exercised such power unless it had been directed by men of outstanding ability. The great editors of the past have been not merely crusaders and interpreters of events but active participants in public affairs, and they have occupied influential positions in the government of the democracies. They have been makers of history as well as recorders.

Nowhere can the historian obtain a better picture of events than in the newspapers, and no social historian now makes a serious attempt to write about the life of any period since newspapers began without reference to the press. The news, the editorial comment, the illustrations, and even the advertisements reveal as does no other source what people were doing, thinking, wearing, and using in their everyday life.

It is, of course, especially desirable that the journalist himself know the history of journalism, for, in addition



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to its cultural value, a knowledge of the accomplishments of the press is of practical benefit to him. It is important that he learn of the success of certain publications and the failure of others and the causes of each. His ethical standards will be influenced by the policies and practices followed by editors of the past. The esteem in which he holds his profession will depend largely upon his understanding of its history, nor, without a knowledge of its past, can he understand the institution of which he is a part.

Another significant general consideration regarding the history of journalistic phenomena is found in the fact that the journalist is himself the historian of the present, and the record which he puts together will, when used with critical discretion, furnish valuable source material for the scholar of the future who delves into the history of our times. Likewise, the historians at work today find help in the old periodicals; but they need guidance as to the reliability of the newspapers which they use—a reliability which varies tremendously from title to title and even from one editorship to another. Histories of the older newspapers and magazines afford much help to modern scholarship by pointing out the limits and degrees of reliability in their subject matter. Dr. Luxon's recent monograph on *Niles' Weekly Register* is an example of this type of aid to historiography.<sup>1</sup>

## APPROACH TO THE PROBLEMS OF RESEARCH

The purpose of history is to interpret the past. Most of the deeper meanings of a culture are difficult to grasp and even more difficult to interpret. The chief reason for this

<sup>1</sup> Norval Neil Luxon, *Niles' Weekly Register: News Magazine of the Nineteenth Century* (Baton Rouge, 1947).

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is that the historian must employ words, and words are not always the stable things they appear at the moment. Definitions, shades of meaning, even new words grow within a society, change, and take on new or fewer meanings with the passage of time. If it is difficult for the semanticist to capture the exact meaning of a word in use today, how much more complex is the task of the historian, who must search into the meaning of a whole culture symbolized to a large extent by words written perhaps centuries ago, then interpret that culture, or at least aspects of it, in words—not always the same words—meaningful to the students of his day.

Thus history can never become an exact science and will always require the cultivated minds of an age to perform its tasks adequately. However, while no mechanical principle will serve to write history, a more scientific approach to the problem in recent years has developed techniques of research which have made much easier the task of the historian and have widened vastly the range of facts available to him. So impressive have been the results of modern searching techniques that many students of history have been dazzled into thinking that accumulation of materials is all there is to historiography.

The trained historian, however, approaches the problems of research with a comprehension of the deficiencies of materials. Though he may possess the proper background and be trained in methodology, he knows that often the vital sources for investigation have been irrevocably lost. Letters and other important records may have been destroyed inadvertently, or purposely, as in the case of Edward Douglass White. Sometimes even the experienced historian is unaware that there are sources other than those

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he has explored, a study of which might throw different light on the subject, and he is usually haunted by the fear that there may exist source materials of which he is ignorant. He can never be sure that what he is writing will stand the test of time; the scholar is wary of using the term "definitive" in reference to any work, for he realizes that the discovery of new material may change the picture entirely.

The necessity for proper library facilities for historical research is obvious, but it cannot be stressed too often. Students working in schools of journalism connected with the larger universities commonly have good libraries at their disposal, but the need for special collections which cannot be met by the ordinary operations of the inter-library loan system will frequently make visits to other libraries an absolute necessity. Thesis subjects must be selected with the availability of all extant materials in mind. Schools of journalism must insist on the acquisition by their own libraries of all the microfilms of newspapers and magazines available to supplement holdings of the originals. The reservoir of such material is growing constantly; it is possible to keep in touch with developments in this field through the *Union List of Microfilms*.<sup>2</sup>

Basic source material of most journalism history is found in the files of newspapers and periodicals. Nothing can take the place of these files, whether original or microfilmed. The chief checklists showing availability of such files are the two comprehensive works edited by Miss Wini-

<sup>2</sup> *Philadelphia Biographical Center and Union Library Catalogue. Committee on Microphotography. Union List of Microfilms; a Basic List of Holdings in the United States and Canada.* (Philadelphia, 1942). — —. Supplement [No.] 1-5, 1942-1946. Philadelphia, 1943—.

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fred Gregory and published by the H. W. Wilson Company.<sup>3</sup>

But while source material is of great importance, the historian knows that the success of his work will depend not just on finding source material, but on his evaluation and interpretation of it. In modern historical research, finding source material is not usually the problem. More often than not, there is an appalling mass of it. The breadth of learning and understanding required for proper evaluation calls for minds of the highest caliber. Particularly is this problem a real one in the case of the historian of journalism, for the abundance of material to be examined necessitates the utmost discrimination. And frequently the novice falls into the common error of judging the relative value of his material by the abundance of it.

## BACKGROUNDS

In some respects the task of writing journalism history is more difficult than the writing of other types of history. This is true because the historian of journalism must be careful to weave into his story sufficient background material to enrich it without transcending the boundaries of his subject. Editors and their newspapers have played such an important part in the social and political history of their times that in writing of them there is a great temptation to go to the one extreme of recording the entire history of an era, or to the other of giving the barest facts without showing the relationship to significant trends and movements.

<sup>3</sup> Winifred Gregory (ed.), *Union List of Serials in Libraries of the United States and Canada*, Second Edition (New York, 1943); *American Newspapers, 1821-1936*; *A Union List of Files Available in the United States and Canada* (New York, 1937).

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In order to portray his subject against the panorama of the times, the writer must have a good background in many fields but particularly in history, economics, sociology, and political science. It is most desirable that the historian of journalism be acquainted with journalistic practices so that he may evaluate accurately and intelligently the mass of source material consisting largely of newspapers and periodicals. He should have a broad understanding of news-gathering organizations and news communications, and he should know something of the mechanics of newspaper and magazine making. A reading knowledge of the language in which the publication is printed is essential. This statement would be obvious if the researcher were studying the press of a foreign country, but even in studying the history of journalism in the United States one comes across source material published in French, German, and Spanish, and occasionally some printed in less familiar foreign languages.

One of the distressing shortcomings of much of the work done in the field of the history of the press is the lack of understanding which too many investigators display concerning the wide and general scope of their own field. The biographer of an outstanding editor or publisher, or the historian of a given newspaper, should be able to place his own limited subject matter in the general frame of reference afforded by the history of journalism. No newspaper or newspaperman lives in a vacuum or without intimate relationship to other journalists and journals. Contemporary writers in the history of journalism, however, are far more likely to be well grounded in general social or political history, or the history of the cities or regions involved, than in the general history of journalism.

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### RESEARCH IN JOURNALISM HISTORY TO DATE

Journalists have been fairly productive in the writing of journalism history and are coming to be increasingly so. They have long since ceased to rely on those outside their fields to do the research for which journalists are especially equipped. When the shortness of the period since the beginning of the study of journalism is taken into account, the production of journalism literature, and particularly of journalism history, may be considered a most satisfactory showing. But the very fact that interest in formal study of the subject was first manifested less than fifty years ago means that the field is still relatively new and opportunities for research are far from being exhausted.

Studies in journalism history have covered a wide range of subjects from general history of newspapers and magazines to a miscellany of autobiographies and reminiscences. Though the earlier works were written by newspapermen and students in other fields, much of the research in recent years has been either performed or directed by college teachers of journalism.

There have been several scholarly surveys of journalism history, including newspapers and magazines, which fill adequately the present need for general works on the subject. These histories not only represent competent research but they have been indispensable in classroom instruction. In exploring the field of American journalism, they have also pointed the way to new avenues of research. One of these studies, in tracing the beginnings of American journalism, makes a brief survey of English journal-

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ism, based upon source material in the London archives.<sup>4</sup> This volume, which is intended to show only the main currents in American journalism, represents careful scholarship. Though it was not the first history of journalism, it was the first acceptable one and for many years was the standard work on the subject. Another of the general histories, constituting an exhaustive study of sources, gives a more complete picture of the growth of the newspaper, with more emphasis on its mechanical development.<sup>5</sup> This voluminous work is a good example of a competent piece of research which is also adaptable as a college textbook. Another survey, restricted to the colonial period of journalism, is significant for its treatment of the newspaper as a social institution.<sup>6</sup> This little volume, which leaves much to be desired from the standpoint of format, represents a type of approach in the study of journalism history which might well be followed in regional and local histories of newspapers. A thoroughgoing history of American magazines, published in three volumes with three more promised, constitutes a much-needed addition to the history of journalism and a splendid supplement to the study of the press.<sup>7</sup> While the earlier histories of journalism contain much helpful material and have served a useful purpose, they are not always accurate or adequate.

There is another survey of the field of American jour-

<sup>4</sup> Willard Grosvenor Bleyer, *Main Currents in the History of American Journalism* (Boston, 1927).

<sup>5</sup> Frank Luther Mott, *American Journalism: A History of Newspapers in the United States Through 250 Years, 1690-1940* (New York, 1941).

<sup>6</sup> Sidney Kobre, *The Development of the Colonial Newspaper* (Pittsburgh, 1944).

<sup>7</sup> Frank Luther Mott, *A History of American Magazines*, 3 vols. (Cambridge, 1938).

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nalism which, approaching the subject from the sociologist's point of view, makes a more analytical study of the newspaper.<sup>8</sup> Though it does not fall in the same category as the previously discussed surveys, it can very well be classified as journalism history, to which it is a worthy contribution.

While there have been some worth-while contributions to regional and local journalism history,<sup>9</sup> studies of this type have not measured up to the high standards set by the more professional writers in the general field. This may be attributed in part to the fact that they have been done by persons inexperienced in research. Then, too, some have been written as theses, often by students lacking both historical background and experience in research. Not that there is objection to the publication of the thesis as such, for there have been a number of commendable monographs published which were written as theses. But not every thesis, however sound the research, should be brought out in book form, and certainly not until it has been carefully reworked to eliminate the thesis flavor.

Some of the most competent studies in journalism history have been the histories of individual newspapers, a number of which have stood the test of time and are still basic works in their field. Much of this type of writing has been done by newspapermen who had easy access to the necessary sources. For this reason, as well as the fact that it is obviously easier to trace the history of a single newspaper than to make a more comprehensive study, this type of history presents fewer problems than general or re-

<sup>8</sup> Alfred McClung Lee, *The Daily Newspaper in America: The Evolution of a Social Instrument* (New York, 1937).

<sup>9</sup> See George S. Turnbull, *History of Oregon Newspapers* (Portland, 1939).



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gional history. One of the chief criticisms of such works, however, is that they have not been written from a sufficiently objective point of view. There is a tendency on the part of the author, if he be a former staff member, to present a distorted picture of the paper whose policies and tradition very likely have become sacred to him. Another danger lies in either failing to weave into the story sufficient background material or going to the other extreme of giving so much emphasis to contemporary history that the thread of the story is lost.<sup>10</sup> A further fault occasionally found is unskillful integration of the materials taken from the file; in some cases this is so bad as to make the book little more than an eclectic assemblage of collectanea without interpretation, structure, or proper transitions.<sup>11</sup> On the whole, however, these histories, despite their weaknesses, are welcome contributions to the history of journalism. The history of the *Baltimore Sun* is, everything considered, one of the best studies of American newspapers.<sup>12</sup> The history of the *London Times*, of which three of the promised four volumes have now appeared,<sup>13</sup> may well serve as a model for all historians of individual newspapers.

In recent years, it is in the biographies of outstanding newspapermen that the most numerous contributions to the

<sup>10</sup> See Philip Kinsley, *The Chicago Tribune: Its First Hundred Years, 1847-1865* (New York, 1943), I, which has a dearth of background material; and Thomas Ewing Dabney, *One Hundred Great Years: The Story of the Times-Picayune from its Founding to 1940* (Baton Rouge, 1944), which contains so much background material that the theme of the story is sometimes obscured by interesting sidelights of history.

<sup>11</sup> See Kinsley, *The Chicago Tribune*.

<sup>12</sup> Gerald W. Johnson, Frank R. Kent, H. L. Mencken, and Hamilton Owens, *The Sunpapers of Baltimore* (New York, 1937).

<sup>13</sup> Anon., *History of the Times* (New York, 1935-1947).

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history of journalism have been made. It is easy to understand why the lives of notable figures in journalism should prove more interesting to do than other types of works. For one thing, biographies represent clearly defined undertakings. Then, too, there is a greater temptation to delve into the lives of colorful newspaper figures than to undertake the more prosaic studies in regional or local journalism history. The biographical studies are very uneven in quality and in research values. Too often they are lacking in objectivity. There is occasionally rank dishonesty in the eulogy of the subject in an "authorized biography." In choosing characters for biographical studies, writers usually have selected men who have ranked high in the profession and whose standing was such as to justify first consideration. Now that so many of these figures have been studied, it is to be hoped that those interested in the writing of biography will undertake the lives of the less well-known editors whose contributions have been in many instances as important as those of the leaders. Suggested at random are the names of a few journalists whose careers should seem inviting to researchers in this field and of whom there are no adequate biographies: John Peter Zenger, Matthew Lyon, Moses L. Annenberg, Frank Leslie, John A. Cockerill, William Duane, Benjamin Wood, James Watson Webb, Manton Marble, Joseph M. Patterson, John M. Daniel, R. B. Rhett, Wilbur F. Storey.

In a consideration of the history of journalism, those studies dealing with newspapers as organs of public opinion should receive much emphasis, as it is this type of work which reveals the press as a social force and attempts to measure its influence in society. There have been only a few

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—too few—studies of this kind written <sup>14</sup> which have been satisfactory in the techniques of their approach to the difficult problems of determining public opinion and the part the newspaper has played in its formation. These studies may sometimes extend into political science and sociology, but fundamentally they are journalism topics; and the researcher trained in journalism is the one most capable of doing the research. It is to this particular type of study that journalists must give more attention lest it be taken over completely by political scientists and sociologists, who are showing more and more interest in this subject.

Many works, such as histories of news-gathering services and newspaper syndicates,<sup>15</sup> studies of news communications,<sup>16</sup> autobiographies, reminiscences of editors, and other studies which may not fall altogether into the field of journalism history but which contain much valuable historical information, constitute a significant part of journalism literature and noteworthy contributions to journalism history. Most of these studies can be classified as research works, as the histories of news-gathering agencies; but some of them are a form of "recollections," <sup>17</sup> interesting and informative, but to be accepted for only what they are represented to be.

<sup>14</sup> As an example of this type see Marcus M. Wilkerson, *Public Opinion and the Spanish-American War: A Study in War Propaganda* (Baton Rouge, 1932).

<sup>15</sup> See Victor Rosewater, *History of Coöperative News-Gathering in the United States* (New York, 1930), and Elmo Scott Watson, *A History of Newspaper Syndicates in the United States, 1865-1935* (Chicago, 1936).

<sup>16</sup> See Ralph O. Nafziger (comp.), *International News and the Press: Communications, Organization of News-Gathering, International Affairs, and the Foreign Press. An Annotated Bibliography* (New York, 1940).

<sup>17</sup> See James W. Barrett (ed.), *The End of "The World"* (New York, 1931).

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In concluding this section it should be stated that journalism history, excellent as some of it is, tends to conform too definitely to fixed patterns of subject and treatment. There is a lack of critical evaluation of subject matter, and also frequently a lack of complete objectivity. It is understood that "authorized" histories and biographies will be presented from a favorable point of view, but there has been too much uncritical writing on the part of those whose obligation it was to apply sound rules of scholarship. While it is conceded that the journalist will write from the journalist's point of view, it does not follow that he is expected to be defensive of, or the apologist for, the newspaper or character he is attempting to present. If journalism history written by the journalist is to be wholly acceptable, it must measure up to the highest standards of critical scholarship.

## **OPPORTUNITIES FOR THE FUTURE**

The opportunities for future research in journalism history lie in enlarging the scope of activity and tightening the critical approach. The contributions already made to the literature of journalism will continue for some time to serve as the foundation for a study of the history of journalism; but the success of future efforts will depend largely upon a broad determination of the possibilities for research along new lines. There should be a breaking away from stereotyped subjects and stereotyped methods of approach. Certain types of journalism history should be presented in the nature of social studies, in close relation to the period covered, not as unrelated incidents or episodes. More attention should be given to the influence exercised by editors and their newspapers, not merely poli-

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tical influence but that which tends to mold the social and economic life of the times. More consideration should be given to the foreign-language press and the Negro press and to the newspapers representing specialized groups, such as labor. And the time has come when some effort may well be directed toward a reassessing and rewriting of general histories of journalism.

One of the neglected fields is regional and local journalism history. There is a real need for histories dealing with the press and the editors of frontier days and their influence in the development of the country, works written not as isolated studies of newspaper history but as broader social studies of communities and regions. If the newspaper is a mirror of the life of a community, then its history should abound in such a richness of material as to make it a notable contribution to regional literature.

In the field of local journalism history especially are there opportunities for research. Histories of old and well-established weekly or semi-weekly newspapers, reflecting community life, would make invaluable contributions to the history of American journalism. Since the files of so many of these newspapers are not stored in repositories where they will be adequately protected against loss or deterioration, it is important that such studies be undertaken soon, before this treasure of source material is forever lost. Schools of journalism could very well sponsor the writing of the historical studies of newspapers in a state or region, which could then be combined into state or regional histories. These would not only constitute works of outstanding value but would serve as useful source material for students in all branches of the social sciences.

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## 2. Research in Legal Problems of Communications \*

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### THE FIELD

Research in the field of legal problems of communications, like research in other areas of the social sciences, cannot be sharply segregated either as to subject matter or as to methods. Almost every research project in the broad area of communications involves economic, political or social as well as legal problems, and in many cases it is impossible to separate the strictly legal from the other aspects. To add to the complications involved in any attempt to segregate the legal aspects is the modern tendency of legal research to branch out into the social sciences and to utilize the findings in those areas in the solution of juridical questions.

A strictly legal problem is one which involves the study of enforceable regulations and their interpretation and utili-

\* "Communications" is here used in a restricted sense to include all those media or segments of media, such as newspapers, magazines, newsreels, radio, facsimile, and television, which are devoted primarily and principally to the dissemination of current information, interpretation, and comment; or in other words to those media or segments of media which are journalistic in nature. Excluded are those media or segments of media devoted exclusively to entertainment.



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zation by enforcing institutions. As such, legal problems are primarily the field of the legal specialist. However, there is a large area on the periphery of the strictly legal problem in which the primary objectives are (a) to discover the need for regulation, (b) to formulate the necessary regulation where a need has been shown, and (c) to test the operation of the regulation and its effect both on the area regulated and on society. Applied to the field of communications (as defined) the strictly legal problem should be studied primarily by persons who have training and experience in legal research. The semilegal or the peripheral area involving the study of the need for regulation, the preparation and drafting of regulations to fit the need, and the operation and effects of regulation present a rich and extensive field for the research worker in communications. In this latter area legal training may be helpful but is not necessarily required.

Research in the legal problems of communications can very well be concentrated in this semilegal area where the present need is great and much remains to be done. In this field, knowledge of communications and of its research methods becomes of equal importance as, or in many cases of more importance than, legal training, and the combination of the two types of research experience should produce invaluable results both for the communications industry and for the public.

The most promising field for research in the legal problems of communications is, then, this vast area which is neither strictly legal nor strictly journalistic but combines in varying degrees the subject matter and techniques of both disciplines. The application of legal research methods to journalistic subject matter and the introduction of the

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techniques of the social sciences to the solution of legal or juridical problems offer an almost limitless opportunity for valuable contributions to the existing knowledge in the important field of communications.

A few examples will serve to demonstrate the extent and also the potential richness of this field of research. The problem of political advertising and its proper regulation is one in which a program of research could very profitably be pursued. Is there a need for enforceable regulation, and if so, how should the regulations be constructed to produce the desired results? What are the existing regulations (and these might be narrowed down to state or local for a particular project) and how are they operating? Information acquired and conclusions deduced would be extremely valuable to the publishing industry, to public officers and candidates for public office, and to the general public.

Another example is the study of existing regulation of broadcasting of controversial issues over the radio, the need for such regulation, and the proposed substitutes for existing regulation. Research in this area would be invaluable to Congress and the Federal Communications Commission in their attempt to find a solution for this problem.

Still another example is found in the legal aspects of the problem of reporting the municipal council. What are the existing constitutional, statutory, and charter provisions applying to this problem? How are they working in practice in a particular or in a selected list of communities? What changes in regulations are necessary in order that the communication medium provide adequate coverage of this important political body?

An essential weakness of many of the proposed research

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projects in this field is that they attempt a superficial coverage of too wide an area and fail to explore thoroughly a restricted segment or aspect of the over-all problem. Solutions for the problems in this field will not be discovered by sitting on an Eiffel Tower and from that point describing the area in terms of generalities. Solutions will gradually arise from innumerable studies of definitely restricted scope, done on the ground. To illustrate by referring to the examples of possible research in a field previously mentioned, a generally acceptable solution for the problem of political advertising will not be evolved until a large number of individual studies are made of results of the operation of particular types of regulation in restricted geographical or political divisions. Several studies of anonymous political advertising and of the operation of particular state statutes should eventually result in an over-all solution for this aspect of the problem. Researchers seem at present to be averse to intensive cultivation of a small area and to be more interested in correlating the researches of others than in conducting restricted and thorough studies themselves.

In the second example cited, the problem of presenting controversial issues over the radio, an acceptable solution will not be found until individual studies have been made of the operation of effects of specific types of regulation on a specific group of listeners. Station XYZ has experimented with a regulation or is willing to experiment with one. How has this regulation operated in this particular station and how has it affected the listeners in its listening area? Such a study or a number of such studies would go far toward giving Congress and the Federal Communications Commission a clue to the most desirable solution.

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In the third example, of the problem of reporting the municipal council, studies are needed of the operation of a particular type of charter provision or municipal ordinance in a particular community before general conclusions can be reached concerning the most desirable form of regulation. Fortunately, sufficiently differentiated forms of charter provisions and municipal ordinances can be found in various parts of the United States, and studies of these different forms and their effects would eventually lead to the comparison of their relative merits as socially desirable solutions for the problem of municipal reporting. But first of all and before comparisons can be made, the need is for the specific and individual study. Analysis must in these projects precede synthesis.

The field for research in the legal aspect of problems in communications media is, as indicated, wide and potentially rich. All that is needed is intensive cultivation by persons equipped with the tools for legal and journalistic research. Most important, the raw materials must be reaped from the individual fields before the sifting and grading can be done at the granary.

## **METHODS**

The methods of the research worker in legal problems of communications are a combination of the methods current in the social sciences with emphasis on the techniques which have been developed in jurisprudence, history, sociology (including criminology), political science, and economics.

Two approaches to these techniques and their use are discernible in the current research in this field, (1) the predominantly historical or case method and (2) the prob-

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lem study or field survey. The first method is the older and probably the more common approach to legal problems in communications. It involves a study of judicial decisions and statutory enactments in the field of inquiry and an attempt, on the basis of this study, to state the law. This is the traditional legal approach to the solution of a legal problem—the search for precedents and analogies and deductions based on the findings. Strictly speaking this is not so much research as search. Usually no attempt is made to evaluate the findings or to study the legal angles of a problem as they relate to the existing social structure. It is a necessary and valuable activity, especially in new areas which create new relationships, but it is not the only method or, for that matter, the most socially constructive method.

To illustrate, some of the more recent problems in this area have resulted from the development and expansion of radio as a means of mass communication. Radio as a method of conveying information, comment, ideas, and entertainment was not known to the men who drafted most of our laws and who wrote most of our court decisions. Today we are faced with the problem of adjusting the legal principles which were evolved in the past to this new medium of communication. One of the more basic questions is whether defamation by radio is slander or libel. The answer to this question requires research involving the application of both legal and social science techniques. First of all the solution to this question requires a thorough and accurate knowledge of the history of the origins of the distinction between slander and libel, followed by the history of the development of these two divisions of the law of defamation. The next step is an

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accurate analysis of the present-day distinctions between slander and libel both in legislative enactments and in judicial decisions. Now come the research techniques of the social scientist. Having mastered the origins, history, development, and current status of the distinctions between slander and libel, which branch of the law of defamation (slander or libel) is more applicable to this new medium of communication, the radio? This last problem involves a study of the nature and effects of current forms of radio defamation. Perhaps the law of slander will more readily solve the problem of defamation by radio, or it may be libel, or perhaps a new or third branch of defamation. Innumerable problems of this nature have already arisen and are continuing to arise with the development of modern telecommunications.

One of the more pressing needs in the field of research under discussion is for the application of modern research and survey techniques in the social sciences to localized problems. This method involves, first of all, a strict limitation and definition of the problem in order that the research worker be kept from wandering off into the forest of legal philosophy. Having limited the problem, the first step is to discover, if possible, the need for regulation or control. A finding that no regulation is needed would solve the problem. Where it is found that some form of regulation is desirable, the next step would be to formulate the most desirable type of regulation and to test this formulation if possible by scrutinizing its effects. For example, is it desirable that some additional form of regulation of the use of photographs in newspapers and magazines be adopted? The answer to this question involves the study of the modern pictorial journalism and its effects on

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the subject, on the reader, and on society. It involves an analysis of current practices in obtaining and in publishing pictures. If this analysis seems to prove the necessity for some form of regulation, the next step is to devise a form of regulation that might be applicable to the current problem in this area.

The method described above might, in the case of some problems, be reversed. The regulation already exists and its operation is to be subjected to research techniques. Is there a need for this particular regulation, and is this regulation fulfilling this need? Again taking the field of pictorial journalism for an example, one of our states has adopted a wide principle for the regulation of the publication of photographs under the right of privacy. What is this regulation and how has it operated in this state? Has it tended to solve the problem of unregulated publication of pictures or has it failed? What changes are suggested?

It is obvious that both the materials and the methods for socially important research in this field of the legal problems of communications exist in an overabundance. The initial step is to determine which project should be tackled first. All we need is research talent equipped with energy, an inquiring mind, and a knowledge of the techniques of the law and of the social sciences.

Since the techniques of the social scientist are being discussed elsewhere in this monograph, no further description of them is necessary here. The research methods of the legal investigator, however, warrant further description. Research in law is based primarily on a knowledge of the source materials and bibliographic aids. These source materials are principally the decisions of the courts and the enactments of legislative bodies. In modern times this

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body of research data is so vast that an investigator is lost without the "finding tools" which have been developed to assist him in his search. A knowledge of, and experience in the operation of, such aids as the American Digest system, Shepherd's Citations, and the index to legal periodicals is essential. These aids are sufficiently simple in operation that the investigator with no legal training can within a short time familiarize himself with their scope and application. Having located the legal data applicable to the problem under consideration, the next step is the analysis and understanding of the judicial decision or the legislative enactment. This step is more complicated and requires more training and experience, but nevertheless the nonlegal research worker very often is able to bring to bear a new point of view which is frequently absent in the legally trained investigator. Legal research calls for nothing more than familiarity with the bibliographic tools and an ability to cut through legal verbiage to the core of the discussion.

## **CURRENT RESEARCH**

Unfortunately no great amount of research in the field of legal problems of communications is being actively pursued at present. In proportion to the large number of unsolved problems in this area, the published contributions may seem meager. In recent years the burden of research in this field has fallen upon investigators in journalism and has been almost totally ignored by research workers from such immediately related fields as law and political science. Recent reports of "Research in Progress Reports of Schools and Departments of Journalism" indi-



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cate that teachers of journalism are conscious of the numerous research problems in the legal field, but a survey of indexes to journals in both political science and law reveals the fact that practically no research is being undertaken in this subject by either political scientists or students of law. Notable was the publication in 1947 of the two-volume work on *Government and Mass Communications* by Zechariah Chafee, Jr.

Current research work in law of communications may be divided into the following: public notice laws, history of law of communications, comparative laws and regulations, legal problems of advertising and business management, and regulations affecting editorial content.

Much recent activity has been devoted to the collection, compilation and annotation of the public notice laws of various states. In several states this work has been undertaken jointly by the state press association and by a school or department of journalism. Research in this field is reported in progress in the following states: Indiana (John Stemple), Illinois (O. C. Leiter), New Jersey, revision (Fred Merwin), New York, revision (M. Lyle Spencer), Ohio, supplement (James E. Pollard), Missouri, revision (H. R. Long).

States which already have completed compilations of laws on public notices include Alabama 1941, Arkansas 1939, California 1937, Colorado 1932, Florida 1943, Idaho 1930, Illinois 1928, Iowa 1939, Kentucky no date, Louisiana 1941, Minnesota 1942, Missouri 1935, Nebraska 1932, New Jersey 1939, New Mexico 1942, New York 1943, North Dakota 1927, Ohio 1937, Oklahoma 1938, Oregon 1941, Pennsylvania 1944, South Carolina

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1933, South Dakota 1938, Texas 1941, Virginia 1936, Washington 1932, West Virginia no date, Wisconsin 1938.

The most valuable study in the field of public notice laws is the *Index of the Public Notice Laws of the 48 States* in two volumes and the companion pamphlet entitled *The Newspaper as Defined by Law* by James E. Pollard of Ohio State University. These studies were made under a grant from the Works Progress Administration. The master index should be extremely useful in bringing the state compilations up to date.

Another valuable study in this area is that made by William Swindler of the University of Nebraska under the title of *Legal Advertising Rates of the 48 States* published as Bulletin No. 2 of the University of Idaho Department of Journalism. Similar studies of other aspects of public notice laws of the various states such as specimen ballots, municipal council proceedings, and school notices and proceedings are urgently needed.

One of the studies of the operation and application of these public notice laws to newspapers is the recent work of Arthur Jenkins, newspaper publisher of Mascoutah, Illinois. This book, *Illinois Newspaper Law*, although based on Illinois law is a valuable discussion of some of the more common legal problems of publication management such as state printing contracts, the bulk sales law, and legal status of a newspaper as an employer.

A few studies in the field of the history of the law of communications have been made or are under way. "The Confederate Press and the Government," by J. P. Jones, Jr., Illinois, was published in the *American Quarterly* for January, 1943. The *Journalism Quarterly* has carried the

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following studies in this category: "Origins of Advertising Censorship in New York," by William H. Boyenton, Rutgers, June, 1942; "Voluntary Press Censorship during the Civil War," by Quintus C. Wilson, Minnesota, September, 1942; "Taxes on Publications in England in the Eighteenth Century," by Frederick S. Siebert, Illinois, March, 1944. The latter is a chapter from a study of the history of freedom of the press now in progress.

Studies of the regulation of communications in foreign countries have been given some attention and include the following which appeared in the *Journalism Quarterly*: "Damages for Newspaper Libels in Great Britain," by Ignace Rothenburg, June, 1943; "Legislation Governing Newspapers in Sweden," by Sten Dahlgren, September, 1943; and "Newspaper Libel in Canada," by William Swindler, March, 1944. Undoubtedly the war interfered with the extension of research in the field of comparative regulation of communications.

Legal problems of advertising and business management have received very little attention during the last four years by research workers from the schools of journalism. Although wide areas of advertising and publication management have been subjected to both Federal and state regulation, very few studies of these regulations or of their effects on communications media have reached the stage of publication.

Several important contributions in the field of editorial content have been published by the *Journalism Quarterly* during the last four years. These include a study of recent developments in the law of photography by Morris C. Davis, September, 1942; "The Legal Problem of the Police Blotter," March, 1943 and "Newspaper Confi-

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dence Laws," September, 1943, both by Walter S. Steigleman; "The Right to Quote from Copyrighted Material," by Warren Price, March, 1944; "The Sweeney 'Chain Libel' Suits Against Pearson and Allen," by Norris G. Davis, June, 1944.

Although this list of studies may seem somewhat meager, it would appear that the law of communications is receiving more attention from research workers in the field of journalism than any other single category. For the past three years the *Journalism Quarterly* has published at least one article per number in this field. In 1942, five studies were published, and in 1943 and 1944, four each.

## SUGGESTIONS FOR RESEARCH PROJECTS

A large number of problems in law of communications deserve intensive study by competent research workers. These problems are found in practically every recognized subdivision of the field of journalism—in reporting, in editing, in editorial writing, in advertising, in publication management, and in radio. Areas which appear to need special attention are legal aspects of editorial problems, regulation of advertising, legal problems of business management of communication media, and legal problems of radio.

Legal problems involving editorial content of communications generally fall into the well-defined legal categories of libel, contempt, copyright, and right of privacy. Still to be solved are innumerable libel problems, such as efficacy of the criminal libel statutes, libels of corporations, trade associations, and voluntary associations such as trade unions, status of governmental bodies such as the coroner's jury, state and federal regulatory bodies, and quasi-

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judicial commissions as privileged news sources, comparative social effects of divergent libel laws affecting public officers and candidates for public office.

In the field of contempt, much needs to be done on the problem of "trial by newspaper." Innumerable instances suitable for case studies continue to occur in various sections of the United States. The proper division of responsibility between the courts, the bar, and the press for maintaining fair and impartial trials still remains to be worked out.

Problems in copyright continue to vex publishers and as the United States takes its place in the community of nations, the complications of international copyright will become acute. Questions of legal rights in information as between radio and the press will also demand solution.

The right of privacy is now sufficiently defined to warrant studies of its effects in those states in which it has been adopted. A comparison of the social effects of published words and pictures in states with well-defined rights of privacy and in states without such rights is urgently needed for the guidance of judges, legislatures and the communications industry. The increase in the use of pictorial matter in newspapers and magazines and the advent of picture-radio in the form of television present a host of new legal problems, such as the ownership of negatives, the right to photograph, and the liability for publishing photographs.

The legal problems of advertising and of publication management have been seriously neglected by research students. The whole field of the effects of the Federal Trade Commission on advertising in the United States is practically untouched. State and local regulation of advertising offer opportunities for innumerable case studies. What

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has been the effect of specific state statutes on medical advertising, on liquor advertising, etc.? Even more neglected than advertising is the field of publication management. Studies are urgently needed of the employer-employee relationship in the communications industry in such particulars as newspaper carriers, correspondents, and solicitors. Here again case studies showing how particular newspapers handle these problems are now lacking. Such problems as the right to advertising-copy ideas, regulation of false advertising, photographs in advertising, and the effects of anti-price-discrimination statutes on advertising deserve extended study. Circulation departments present a number of legal questions which need solution such as legal status of free circulation newspapers, post office regulations and their effects. In the purely business side, legal problems are arising in connection with employer-employee relationships especially in the form of contract for employment.

Radio as a relative newcomer to the field of communications presents a number of new problems. Should defamation over the radio be considered a slander or libel? Should radio because of its mechanical peculiarities be granted special immunities for liability, for instance for "ad lib" programs? Does the station management have power to censor or should he have this power? What changes are needed in the regulations of the Federal Communications Commission? These are some of the problems in radio which would merit attention by research men.

These suggestions are merely examples of a host of others which will become readily apparent to the legal

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investigator. What does not become so readily apparent is the need for studies of the social effects of the existing regulations in the field of communications. To this type of problem the research worker with both legal and social science background can contribute valuable service. An analysis of the social effects of the various regulations both on the communications industry and especially on the public which is served by the particular unit or branch of the industry is urgently needed. What has been the result on program content in those states where radio falls under libel rather than under slander? What improvement in news coverage is attributable to legislation requiring certain public bodies to be open to the press? What effect on advertising copy has followed the enactment of anti-price-discrimination statutes? These are problems related both to law and journalism. Their study and solution would benefit the law, the communications industry, and the public which both the law and the industry seek to serve.

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### 3. Journalism Research and Statistics

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The purpose of the following discussion is to state (although not to explain) those statistical techniques that it is necessary to utilize in various types of research in the field of journalism.

#### REPORTING AVERAGES

Perhaps the simplest example of such studies is the reporting of obtained mean page costs of submetropolitan newspapers within one state. Because the number of such publishers is not large and the data are ordinarily gathered by mail questionnaire the sample is never very large. The spread, or scatter, of the values about the mean, therefore, is of great significance to the reader who questions the reliability of the mean. In all such cases, the investigator should report the *standard error* of the mean, which is a measure of reliability which takes into account both the size of the sample and the dispersion of the individual values about the mean.

Let us suppose that 40 publishers have responded with costs ranging from \$14 to \$38 with a mean of \$25.93. In one hypothetical instance of dispersion the standard error

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(computed on the one per cent confidence level <sup>1</sup>) would be  $\pm 5.4$  and in another case of much less dispersion and somewhat wider range the standard error would be  $\pm 3.1$ .

Another aspect of the matter of reporting averages is the selection of the appropriate average—mean or median. In order to avoid giving undue emphasis to extreme items, the median is often selected. In reporting the average recognition of newspaper display advertisements of particular categories, for example, the median is the more descriptive average.

In some instances, a study relates to a finite population and its findings are not expected to have general significance; in such cases the standard error is reduced by utilizing a correction factor.<sup>2</sup> For example, it was desired to compare the data obtained from a public opinion poll taken in the community of Boulder, Colorado, with the data obtained from a poll taken in election booths of the city on the day of the election; <sup>3</sup> the universe in this instance is the voting population of Boulder. A similar situation may occur in measuring juvenile reading behavior when, for example, a high percentage of the senior class are subjects; the findings are obviously conclusive for this class but no general significance is asserted for them.

<sup>1</sup> That is, the variation of the obtained mean from the "true" mean will not exceed the standard error in more than one per cent of the cases.

<sup>2</sup> A commonly used formula for computing the standard error of a finite population is  $\sqrt{\left(\frac{p \cdot q}{N}\right)\left(1 - \frac{N}{N^1}\right)}$

where  $N$  refers to the sample and  $N^1$  to the finite population measured; the first parenthesis is the usual formula and the second parenthesis is the correction factor.

<sup>3</sup> H. H. Field and G. M. Connelly, "Testing Polls in Official Election Booths," in *Public Opinion Quarterly*, 6 (1944), 610-16.

### WHEN ARE PERCENTAGE DIFFERENCES SIGNIFICANT?

The obtained difference between two percentage scores for a 1400-line advertisement in two different reader-interest studies may not be a significant difference. For example, such an advertisement in Paper A is found to be 48 per cent for women and in Paper B 42 per cent for women. On the one per cent confidence level, for a sample of 250, the statistically significant difference is 11.5 and on the 5 per cent confidence level is 8.8. The obtained difference of 6 per cent is not significant on either confidence level.<sup>4</sup>

The same significance test applies to radio program ratings. When, for example, Program A has a rating (i.e., percentage of radio homes) of 13 and Program B of 9, the obtained difference of 4 per cent will not be significant at the one per cent level unless the sample is as large as 1,000.

When such scores are presented in a table for comparison the standard error of each score should also be stated and sometimes the standard error of the differences should be stated in a footnote.

In a few cases the scores will not be independent and the formula for correlated data should be used. One such example is an opinion poll that forecasts a local primary election in which (say) seven or eight candidates are running but the roster presented to respondents limits the

<sup>4</sup> The formula for uncorrelated percentages from different samples is  $o_{dp} = \sqrt{o^2 + o^2}$ . When the data is correlated the correlation factor,  $\left(\frac{2}{N} \cdot P_1 \cdot P_2\right)$ , should be added to the value obtained from computing the foregoing formula.

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choice to three or four leading candidates. In this instance the scores are not independent because an unknown number of preferences for these candidates have been subtracted from candidates not listed on the roster.

### SAMPLE SIZE IN READER-INTEREST STUDIES

It is not usually practicable to have a sample in excess of 500 in a daily newspaper reader-interest study because (a) the survey must be done on the day following publication, and (b) it is not practicable to recruit and train a crew capable of obtaining a larger sample. Moreover, since we generally compute scores separately for each sex our largest practicable sample is really only 250.<sup>5</sup>

Stability tests <sup>6</sup> indicate that samples of this size would not be improved greatly by the taking of additional interviews, and samples of one-half this size have been found stable for homogeneous small cities.

Nevertheless, the standard error on samples of this size is high enough to indicate caution in comparing individual advertisements in the same paper or in comparing scores in one paper with scores in another.

Although the reader-interest sample should be stratified at least as to sex, age, and circulation area, certain practical considerations make sex and age quotas difficult to fill in some surveys. Among these are the heavy bundles of papers carried by the interviewers and the necessity of

<sup>5</sup> Of course, the sample could consist exclusively of men or women. Larger samples can be obtained, too, in the measurement of certain Sunday sections and of weekly newspapers because the interviewing can be spread over a longer period without the respondent being exposed to the next issue of the section or weekly newspaper.

<sup>6</sup> A stability test, as distinguished from a measure of reliability, is obtained by computing cumulatively groups of interviews of equal size.

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working from lists of subscribers in order to locate readers of the particular paper. For these reasons several check questions (e.g., telephone and passenger-car ownership) should be asked and then compared with the actual population data.

It should be kept in mind that the sample is of the particular newspaper's readers, not of the community, thus requiring adjustments of the actual population data. An excellent sample of the paper's circulation can be obtained, however, by designing a probability sample of the city and then having the publisher supply names of subscribers in the selected blocks.

### **THE RELIABILITY OF BREAKDOWNS**

It should be remembered that the  $N$  for computing the standard error of any breakdown of data is the number of cases in the specific breakdown, not in the total sample. For this reason, the soundest procedure in determining the size of the total sample is, first, to ascertain the smallest breakdown required, and next, to compute the size of the total sample on the basis of assigning (say) 50 as the  $N$  of the smallest breakdown. Thus, if the smallest breakdown required is the 20–29 age group of men and such a group is 19 per cent of the population, the total sample would be 450.

When a study is done of a large area, few of the breakdowns on a geographical basis are reliable unless the total sample is unusually large. This means that when scores in a national survey are reported for specific sections, states, or cities they may be very unreliable as to those breakdowns. This statement has application to all national opinion polls done on the usual sample of 2,000–3,500 and may be true

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of radio ratings under certain conditions. The poll administrator, for example, must decide in advance whether he is designing merely a national sample or a national sample reliable for geographic breakdowns; if it is the latter, he must actually construct—for states—48 samples.

### THE NULL HYPOTHESIS

In some situations we are not interested so much in computing the magnitude of differences between groups as we are in merely ascertaining whether or not there is *any* difference; that is, any difference which is not due to chance. For example, we may wish to determine whether or not brand preference data obtained from a consumer jury panel represent a true difference.

To do this we employ a statistic that will test the hypothesis that the true difference is zero (null hypothesis) or that the observed frequencies are uniform (for example, that the obtained preferences for brands A, B, and C are not 35, 29, and 26, but 30, 30, and 30). This statistic, commonly used by geneticists, is known as the chi-square test.<sup>7</sup> The computation of chi-square is very simple provided one understands its logic and is equipped with the tables designed by R. A. Fisher (*Statistical Methods for Research Workers*). Its main advantage is that it is applicable to small samples, whose distribution is not normal.

Simple formulas, based on modifications of the chi-square formula, have been developed by Zubin and Peatman to test the significance of coupon returns from split-run copy (or for any other situation in which two equally

<sup>7</sup>  $\chi^2 = \frac{\sum (f_o - f_t)^2}{f_t}$  where  $f_o$  is the obtained frequency in a category (E.g., Brand A) and  $f_t$  is the hypothetical frequency.

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contrasted groups are to be compared).<sup>8</sup> The equations, when exhibited as nomographs, not only permit the user to test the statistical significance of obtained differences, but indicate the minimal size of sample that will obtain statistically reliable differences.

### ANALYSIS OF VARIANCE: THE 'F' RATIO

R. A. Fisher a few years ago developed analysis of variance which has been used extensively in genetic and agricultural studies. The first use of this method in journalism was reported by English in 1944 in a study of the comparative readability of certain newspaper headline types.<sup>9</sup> He tested the readability of common headline types (Bodoni, Tempo, and Karnak) by presenting printed headlines of each design and in three sizes to 45 subjects under certain controlled conditions. It was possible to control certain physical factors (e.g., length of line, spacing, contrast, etc.), but the following variables could not be controlled, viz., difference in the ability of the readers, differences of headline difficulty, and difference in size.

Using the method of analysis of variance, he designed a technique for isolating those variations that were traceable to each of the uncontrolled factors.<sup>10</sup> English found

<sup>8</sup> J. Zubin and J. G. Peatman, "Testing the Pulling Power of Advertisements by the Split-run Copy Method," in *Journal of Applied Psychology*, 29 (1945), 40-57.

<sup>9</sup> Earl English, "A Study of the Readability of Four Newspaper Headline Types," in *Journalism Quarterly*, 21 (1944), 217-99. This is probably the most carefully controlled experiment thus far reported in research in journalism.

<sup>10</sup> It is not within the scope of this chapter to explain the method. E. F. Lindquist's *Statistical Analysis in Educational Research* (Boston, 1940) is a treatise on Fisher's statistics in the vocabulary of educational research. Since it contains the most commonly used tables devised by Fisher and others it may be used as a handbook.

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that the variance<sup>11</sup> traceable to each of the aforementioned uncontrolled factors was not significant (i.e., could be due to chance), but that the variance for "design" (Bodoni, Karnak, and Tempo) was significant. He used the same method to analyze variances within the Cheltenham family.

This method is known as the "F" test, "F" being the ratio between the variance of the means of the groups and the average variance within the groups. The test is whether the "F" ratio is higher or lower than the corresponding value in the table for the 5 per cent and one per cent significance levels. When the "F" ratio is higher than the corresponding value in the table it is significant (null hypothesis).

It should be noted, however, that this method fails unless one is certain that he has randomized all factors extraneous to those whose variance is analyzed. English was able to do this by various laboratory and other techniques including the designing of a Graeco-Latin square pattern for each group of three readers.

## CORRELATION

In a few studies relating to journalism the findings are expressed in terms of the coefficient of correlation; for example, the reading behavior of men and women or of boys and girls or of comparisons of different methods of measuring reading behavior.<sup>12</sup> In very few studies that relate

<sup>11</sup> The "variance" of a distribution is the square of the standard deviation of the distribution. "Variation" (deviation) refers to the deviation of the *individual* measure from the mean of the distribution.

<sup>12</sup> Cf., for example, C. F. Weigle, "Two Techniques for Surveying Newspaper Readership Compared," in *Journalism Quarterly*, 18 (1941), 153-57.



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to journalism, however, does the coefficient of correlation express a causal relationship.

The most frequent use of  $r$  in journalism studies is as a linear measure of reliability. An illustration is the correlation between two tests of interviewers' estimates of respondents' age and socio-economic status; another is the correlation between split random halves of obtained data. In dealing with the type of data obtained in journalism studies there is little opportunity for spurious correlation.

Some situations arise in which two series of scores do not have values along a continuous scale but represent differences in rank, as, for example, in "judging" situations. In this instance a nonlinear coefficient of correlation is obtained by the rank-difference method. The formula is

$$\rho = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$
 where  $\rho$  is the rank-difference coefficient of correlation and  $D$  is the difference between the ranks.

Journalism studies sometimes encompass attitude measurement either as a way of evaluation of bias in content<sup>13</sup> or as an aspect of social psychology. In the latter types of studies the method usually demands factorial analysis because of the presence of several variables.<sup>14</sup>

<sup>13</sup> Cf. C. R. Bush and J. Cook, "The Measurement of Editorial Attitudes," in *Journalism Quarterly*, 12 (1935), 367-74. This is a utilization of the Thurstone scale to measure the difference in attitude toward Russia of four selected newspapers from 1930 to 1934. The correlation coefficient is also a necessary measure in the method of content analysis developed by H. D. Lasswell; cf. H. D. Lasswell and N. Leites, *Language and Politics*, New York, 1949.

<sup>14</sup> Cf. H. F. Gosnell and M. J. Schmidt, "Factorial Analysis of the Relation of the Press to Voting in Chicago," in *Journal of Social Psychology*, 7 (1936), 373-85.

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### LIKE-DISLIKE COMPUTATIONS

In the measurement of like-dislike attitudes with respect to types of reading matter, parts of radio programs, and vocational interests, it has been customary to assign relative weights to each reaction as follows: Like, 2; Indifferent, 1; and Dislike, 0. Lazarsfeld and Robinson<sup>15</sup> have contributed a refinement to this method by computing the combined score in units of the standard deviation. Although the two computations yield approximately the same results, the sigma method gives a more valid interpretation of the Indifferent and Dislike attitudes on the assumption that many Indifferent attitudes are actually negative rather than neutral.

### CYCLICAL TREND

In all measures of circulation and advertising volume in a time sequence setting, it is necessary to eliminate from the actual data the influences of secular trend and season.

It is best to state such data in terms of *index numbers*. This introduces the question of which base year to select; this problem is one of logic, not statistics.

Other comparisons which are better stated in terms of index numbers rather than of absolute values are those involving milline rates and readership scores in newspapers of various types, and of newspaper space and radio-time advertising rates.

<sup>15</sup> P. F. Lazarsfeld and W. S. Robinson, "Some Properties of the Trichotomy 'Like, No Opinion, Dislike' and Their Psychological Interpretation," in *Sociometry*, 3 (1940), 151-78. Cf. also a discussion of this method by P. Eisenberg, "Two Methods of Combining Attitudes of Like, Indifference, and Dislike Into One Score," in *Journal of Applied Psychology*, 29 (1945), 246-51.

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## 4. The Questionnaire Interview

EARL ENGLISH

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To the student familiar with the practice of journalism, "interviewing" as a research technique will not be found a new or mysterious process. Newspaper reporters have been basing their stories on interviews since the earliest years of journalism. Much of the work with questionnaire interviews, however, has not been done by newspaper reporters. Workers in other fields have done the pioneering for the most part, although newspapers have published a good share of the information which the newer methods have yielded.

Accurate reports of what people are *thinking*, their opinions and attitudes on important issues, are as newsworthy as what people are *doing*. It is of course true that a single newspaper may be unable to investigate public opinion nationally, but it need not miss the opportunity to participate locally in this important field of journalism, that is, if techniques become reasonably standardized and editors and reporters can be interested in the newer methods.

A serious student in the field of reporting or advertising should study the reporting methods of the public opinion

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polls and of the business and industrial researchers—a continuing study—for the field is new and the techniques far from perfected. Competent newspaper men have important advantages over workers from other disciplines in learning the new survey methods, for newspaper men are accustomed to working with the public and the technique of the traditional interview is essentially the same as in the polling projects. Reporters have developed the knack of defining issues clearly, as well as the skill of summarizing readable reports, accomplishments that do not come easily.

### PROGRESS OF POLLING

No one field of endeavor has clearly dominated opinion measurement to date. The journalist was in the field earliest with the traditional interview, augmented by the newspaper straw ballot, as far back as 1824 when the Harrisburg *Pennsylvanian* used the method during the Jackson-Adams presidential campaigns. Straw election ballots frequently were printed in the newspaper itself and readers were urged to clip and return the completed form. A few publications augmented their ballots in the paper with votes solicited in public places, and in 1928 at least two publications, the Columbus *Dispatch* and the Cincinnati *Enquirer*, assigned trained interviewing crews to selected areas.

These publications gathered their ballots in such a way that their samples were reasonably representative of the voting population. This practice is the fundamental basis of scientific sampling and its superiority over the old method apparently was demonstrated in the election of 1936. In that year three major opinion polls, *Fortune*, Crossley, and Gallup, using modern sampling methods,

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predicted Roosevelt's election by comfortable pluralities. At the same time, the *Literary Digest*, using the older methods and a sample of 2,376,523 ballots, predicted that Landon would receive 57 per cent of the major party vote. The prediction was in error by 19 percentage points. From that time until 1948, when the leading public opinion polls failed to predict the election of President Truman, the method enjoyed a fairly wide public confidence.

Psychologists pioneered the technique of the questionnaire before World War I in intelligence-testing programs as well as in the measurement of advertising effectiveness. In the decade after the World War commercial researchers, seeking public opinions on automobiles, soaps, advertisements, etc., introduced several important techniques which guide opinion polling today. These included the use of the face-to-face interviews with a formal questionnaire as a guide, as well as improvement in the selection of the sample group on which a study is based.

In the late twenties psychologists devised scales for the measurement of attitudes, a means whereby the intensity of feeling of a group on an issue may be accurately registered.

Since the early 1930's political scientists, economists, sociologists, and statisticians, as well as psychologists, have made great contributions to this field of fact-finding through interviewing. The specialized techniques and background considerations of these fields have been synthesized to increase the general effectiveness of the method. . ,

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### SCIENTIFIC INTERVIEWING APPLIED TO COMMUNICATIONS RESEARCH

As practiced today, this research method has a practical value for journalism in at least two different respects. It provides means for the gathering of new, interest-provoking and socially valuable, news reports—what people are thinking; it provides industry and advertising with the tool to expedite the efficient creation and movement of goods and services through the world's markets.

Scientific interviewing as used in communications research provides a means of measuring the attitudes and opinions of a group of individuals. An attitude is defined by Leonard W. Doob<sup>1</sup> as "an implicit, drive-producing response considered socially significant in the individual's society." An opinion may be defined as an expressed attitude, but it may not necessarily correspond to the attitude which it is supposed to represent. Opinion polling is, nevertheless, based on the assumption that the expressed opinions of a group are representative enough of basic attitudes to yield efficient predictions of future related events.

In the field of communications we frequently measure expressed attitudes to learn what people like to read, or which radio programs they find most acceptable.

In the case of publications, readership studies provide information of this kind. Each member of a selected group of a publication's readers is shown a copy of a particular issue and asked to indicate what he recognizes as having read or seen. Percentages based on the number of actual

<sup>1</sup> Leonard W. Doob, "The Behavior of Attitudes," in *Psychological Review*, 54 (1947), 135-56.

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men and women readers are then computed for each story, picture and advertisement. Probably the most ambitious undertaking in this field is the "Continuing Study of Newspaper Reading" conducted by the Advertising Research Foundation.<sup>2</sup> More than 120 newspapers have been surveyed. For an up-to-date discussion and illustration of practical readership studies see chapters by H. C. Ludeke and Cornelius Du Bois in A. B. Blankenship, *Consumer and Opinion Research* (New York, 1943).

Both the media and the advertisers have a common interest in obtaining information in order to give people the kind of publications and radio programs they desire and to help define present and potential markets for goods and services. As a result there have developed many commercial research organizations specializing in various types of investigations. In addition to periodic and continuing studies provided by these specialists, a few newspapers, magazines and radio stations have set up their own research organizations.

The writer recently asked C. M. Campbell, advertising manager of the Chicago *Tribune*, to indicate the extent of the general research activities of that newspaper. He replied:

Here at the *Tribune* we are placing more emphasis each year upon research of all types in connection with the sale of advertising as well as for guidance in choice of features, comics, etc. I am sure you will find that this work will become more important in the newspaper field as a whole not only from the standpoint of selling advertising, but also to assist advertisers in getting the maximum value out of newspaper space.

<sup>2</sup> Advertising Research Foundation, *The Continuing Study of Newspaper Reading*. 100-Study Summary (New York, 1946).



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Our present research can be divided into seven major phases:

1. Study of the intensity with which people read our papers—news features and advertisements.
2. Measurement of the number of families who read our paper, other papers in our city, and other publications.
3. Analysis of buying habits of consumers in our market.
4. Information from dealers on distribution and volume of sales.
5. Analysis of the business of our customers, such as department stores through sales slips, deliveries and charge accounts.
6. Analysis of price lines and emphasis on various merchandising departments in relationship to advertising pressure.
7. Determination of factors which increase readership of advertisements.

As a whole, research has been found very valuable and important in all phases of our activities. Fundamentally, it is an effort to discover the facts and determine procedure by analysis and study rather than by guess work.

Interviewing provides the basic technique in several of these *Tribune* enterprises. Other newspapers, such as the *Chicago Times*, are providing advertisers with a wide variety of marketing information by means of consumer panels, or "pantry polls," much of which is disclosed through interviewing.

A few newspapers like the *Des Moines Register* and *Tribune*, the *Minneapolis Star* and *Tribune*, the *Philadelphia Bulletin* and the *Washington Post* maintain their own polling organizations and publish the results of these surveys at regular intervals. A smaller newspaper, the *Rome (N.Y.) Daily Sentinel*, recently demonstrated the prac-

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ticability of setting up an inexpensive polling organization and publishing tie-ups of public opinion reports with current news stories.<sup>3</sup>

It makes little difference, then, whether we seek to learn public opinion on the momentous questions of the day or consumer habits and preferences on commercial products; the means of inquiry is essentially the same—the questionnaire interview.

Occasionally a journalism student is called upon to conduct a survey as part of his training program. It is possible for him to follow step-by-step the same procedures and exercise the same precautions as those used by the public opinion pollers and commercial researchers in handling large-scale complex issues. But it should be observed that the validity of any conclusions which the survey seems to justify will be governed by the extent to which scientific method was followed in collecting and interpreting the data.

In this chapter an attempt will be made to present a few fundamental principles of interviewing and perhaps suggest some of the precautions which any worker in the field must take into consideration. For the student who is preparing to work on an interviewing project, either for an employee or for himself, the references at the end of this chapter will serve as an introduction to the already extensive literature on the subject.

### STEPS IN CONDUCTING A SURVEY

Briefly stated, the steps in conducting a survey using the questionnaire interview method are as follows:

<sup>3</sup> J. H. Handler, "In Rome, N.Y. They Do As the Gallup Pollsters Do," in *Editor and Publisher*, 80 (1947), 26.

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1. *Statement of Purpose*—State carefully the question or questions which the survey intends to answer.

2. *Interview Design*—Investigate the possible advantage of recognizing natural grouping of the interview subjects so that contrasting sets of data may be compared.

3. *Sample Selection*—If it is not possible to interview each member of the group under study, a plan must be devised to select a smaller group of subjects to serve as a sample of the whole.

4. *Question Form*—Decide on the physical form which the questions are to take.

5. *Phrase and Pretest Questions*—Carefully write the questions and conduct a trial run of interviews to determine if the objectives of the investigation (step 1) are being realized.

6. *Interviewing*—Select, train and supervise the interviewers.

7. *Summarizing*—Tabulate data and draw conclusions.

### STATEMENT OF PURPOSE

To the journalism student undertaking a research project in which scientific interviewing may be employed, the first and perhaps most important consideration should be the clear recognition of the study's purpose. The purpose of a questionnaire survey is to find the answers to one or more questions. It is important in the beginning to set down the particular questions for which answers are sought, as well as other questions which have a general bearing on the principal subject of study.

For example, if the survey features the traditional readership study to determine how well a certain publication is read, other factors which might have a useful bear-

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ing on the subject include: number and kind of other publications read by subscribers, time devoted to reading and radio listening, how long publication is kept available for reading, attitude of subscribers toward advertisers, extent to which copy is lent to persons outside family, etc. But the survey director of the traditional type interview should resist the urge to pile up a battery of questions on every angle of possible significance, for in so doing he is likely to exhaust the patience of the interview respondents and amass a collection of answers that defy logical classification. In this connection it is well to foresee the tabulations that are to be made of the data when they are finally in. Looking ahead at this point to the tabulation of responses will help in eliminating superfluous questions and also suggest questions that might otherwise be overlooked.

### **INTERVIEW DESIGN**

Usually an interview study requires but one survey of the group under study, but it is well for the planner to investigate the possibility of employing some form of experimental design. More detailed information on this method is to be found in Professor Allen's chapter in this volume. Several of the studies referred to later in this chapter are of this nature. Briefly, these surveys are so constructed that measurable differences in responses between groups are readily revealed. In public opinion polls it may be useful to show over-all differences between geographical areas, races, sexes, income groups, etc.

In addition to group differences, the relative stability of opinion with the passing of time, especially as influenced by the impact of related events, is sometimes sought. This

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involves taking a survey of the group before and after the occurrence of the event under study.

A continuing study of public opinion may reveal the rise and fall of a candidate's favor in the eyes of the electorate as various events exert their influence. It is, however, unwise to attribute any particular change or effect in group opinion wholly to a particular cause, but under certain conditions the reliability of a cause-effect relationship may be improved by use of a control group. The control group is similar in all respects to the experimental group, save that it is not permitted to come under the influence of the experimental variable, the factor being measured.

For example, the effect of an editorial campaign in a college newspaper has been studied by "planting" a series of special editorials, the experimental variable, in the copies of a newspaper that went to a certain group of students.<sup>4</sup> The control group was, of course, composed of readers who were not "exposed" to the special editorials. The opinions of both groups on the editorial subject were sought before and after the editorials were run. The net change in the difference of opinion between the control group and the experimental group represented the effect of the editorial campaign.

This practice of switching certain content in an edition of a publication, the split-run method, also provides an excellent technique for utilizing experimental design in readership interviewing.<sup>5</sup>

<sup>4</sup> N. C. Meier and A. D. Annis, "The Induction of Opinion Through Suggestion by Means of 'Planted Content,'" in *Journal of Social Psychology*, 5 (1934), 65-81.

<sup>5</sup> Earl English, "Use of Split-Run Techniques in Studying Ad Typography," in *Journalism Quarterly*, 23 (1946), 66-68.

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### SAMPLING METHODS

In certain interviewing situations it is possible to obtain a complete census by interviewing every person in the carefully defined group under consideration as, for example, in gathering market information from the merchants in a particular city. More often, because of the prohibitive cost and length of time it takes to reach the entire population under study, a small group of subjects must be selected to serve as a sample of the whole. If the smaller group is selected in such a way that every member of the population has an equal chance of being included, the characteristics of the random sample that results will be present in approximately the same ratio as in the larger group.

The method employed in an attempt to give each member of a population an equal chance to be included will depend upon the kind of survey being undertaken. If a group of comparable measures can be represented by cards in a file, or if directory lists are available, it is a simple task to obtain a random sample of this population. Every fifth or tenth card or listing may be selected at uniform distances along a linear scale. This method of selecting items at uniform intervals is frequently used in mail surveys as well as in measuring radio audience listeningship by residential telephone calls. Another method is to number the items in the population and determine the sample by a table of random numbers, instructions for which may be found in textbooks in elementary statistics.

Whatever method is selected for obtaining the sample the researcher must be reasonably certain that the method of selection does not correlate with the data he is seeking. The *Literary Digest* provided a frequently cited departure

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from this rule when its sample of more than two million telephone subscribers and automobile owners proved unrepresentative of the population (voters) being measured. While such a list had provided an acceptable prediction since 1916, the 1936 voters tended to divide into economic classes so that there was a correlation between the way they voted and their status as automobile owners or as subscribers or nonsubscribers for telephone service. Use of the periodicity technique, that is, sampling every  $n$ th case as mentioned above, may also yield biased data in a certain locality if, for example, the economic factor is an important consideration and instruction to field workers to call at every fifth or tenth house happens to turn up an unrepresentative number of corner houses.

An area-sampling technique is producing excellent results for a number of research groups, particularly the United States Bureau of the Census and Agricultural Economics and Labor Statistics Bureaus. A network of lines forming sections of equal size is drawn over a map of the area to be surveyed. The blocks or specified adjacent areas in which the lines intersect are selected at random for interviewing. Usually the household units in the selected blocks or areas are chartered and subsampled to obtain a proper numerical balance between the different blocks and also to take into consideration other known characteristics of the block samples and parent population. In this way the responsibility for random sampling is in the hands of a central office, or director, thus assuring consistency of method and providing a check on the accuracy of the interviewers. For the most part commercial researchers have considered the method too costly, although at least one large public opinion agency is mak-

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ing increasingly greater use of this sampling technique.

Professor Likert has made available a fuller discussion of the area-sampling technique.<sup>6</sup> He contends that the area method permits the appropriate use of our probability formulas, whereas the quota-controlled method, which yielded rather high percentage point errors for the 1948 election forecasts, does not. In quota-controlled sampling the responsibilities for random sampling are divided between a central office and a staff of interviewers. From various sources, including principally United States Census reports and earlier opinion surveys, certain characteristics of the social and voting populations of the nation are available by state and geographical area. For example, it is known that approximately 7 per cent of the United States population live in the New England area. If 2,500 interviews are to be made over the entire nation, 175 of them should come from this area to control properly the effect of geographical area differences. Interviews in the remaining geographical areas are similarly allocated.

An effort is made to control in a similar way other factors which are believed to influence opinions (voting) and whose distribution in the various geographical areas is known. These are principally sex, age, and economic level, although the factors of color, farm or nonfarm, and political affiliation are sometimes included. Interview assignment sheets are sent to interviewers with instructions as to the total number of interviews to be obtained and the apportionment of the age, sex and economic-status factors in the sample. Proportionate distribution of city, town and country interviews is controlled partly by instructions

<sup>6</sup> R. Likert, "Public Opinion Polls," in *Scientific American*, 6 (1948), 7-11.



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on some of the assignment sheets and partly by selection of interviewers at proper sampling points.

While an interviewer is told the number of interviews to make in each variable under control, the proper selection of the particular respondents is the interviewer's responsibility. Economic status, for example, is distributed into A, B, C, and D classifications. Inasmuch as economic status and rental values are closely related, the interviewers for National Opinion Research Center frequently are instructed to base their appraisals on the rental values of each respondent's residence.<sup>7</sup> Other polling agencies ask interviewers to assign their respondents to a standard of living scale which includes such items as income, size of dwelling, etc.

A working knowledge of statistics is virtually necessary to arrive at a meaningful answer to the question, "How large a sample is needed?" Both Blankenship<sup>8</sup> and Cantril<sup>9</sup> give excellent consideration to this and other problems of a statistical nature, but a person who intends to supervise work in the interviewing field should have a good grounding in the basic principles of statistics. The size of sample must be decided on the basis of the reliability, or precision, desired in the results. Under ideal conditions the larger the sample the greater the confidence one may place in a prediction based on a sample's data. This confidence, which in opinion polling is usually expressed in percentage points, is directly proportionate to the square root of the sample's size. Dr. Bush considers

<sup>7</sup> National Opinion Research Center, *Interviewing for NORC* (Denver, 1945).

<sup>8</sup> A. B. Blankenship, *Consumer and Opinion Research* (New York, 1943).

<sup>9</sup> H. Cantril, *Gauging Public Opinion* (Princeton, 1944).

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this and related problems in his chapter on statistical methods in this volume.

### QUESTION FORM

It has been said that one may obtain almost any answer he desires in interviewing by the skillful manipulation of the questions. This is probably an overstatement, but nevertheless the problems in question framing constitute a principal frontier of interviewing.

Ordinarily the questions asked in an interview are arranged in one of the following forms: (a) *dichotomous* (yes-no), (b) *multiple choice* (cafeteria), or (c) *open-end* (free answer). *Attitude scales* also have a common purpose with these question forms and some of the advantages and disadvantages of each will be considered here.

The dichotomous form measures the "either-or" type of response which, perhaps unwisely, dominates much of our thinking on issues, public or otherwise. If issues appear to be "two-valued," rather than "multi-valued," the dichotomous form is the popular choice. The danger lies in forcing a respondent to make a "yes-no" decision when more valid returns may be had by a multiple-choice technique. That is, if we are investigating how people tend to vote on a referendum, there seems little point in slicing the issue other than dichotomously. If, however, a large percentage of "don't know's" build up with the "yes-no's" about equal, greater predictive value may lie in a multiple-choice form. The latter form, however, may not exhaust the possibilities, and wise users of the method, particularly in consumer preference studies, frequently leave space for additional preferences. But even if the issues at first glance

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call for dichotomous questions, there are those who advocate multiple-choice probing even here. Elmer Roper in a *Fortune* survey <sup>10</sup> during the 1940 Willkie-Roosevelt campaigns found greater predicative value in a four-part attitude scale than in the straight "yes-no" type question, "For whom do you intend to vote?"

In open-end questioning, the respondent answers the question in his own words without conforming to a list of stipulations. In certain interviewing situations the open-end, or "free-answer," method is employed to draw the respondents into full intensive discussions by means of topical questions. Controversy over the merits of this method, sometimes called "depth interviewing," as contrasted with the more objective methods, is now being waged. Proponents of depth interviewing point out the great value in investigating the extent to which those interviewed are aware of the meaning of the questions asked as well as the various implications contained in their answers.<sup>11</sup> In advertising research the open-end interview may throw light on the important subject of influences; that is, what factors caused the respondent to take a certain action. Detailed probing in this direction takes one into the fields of complex attitude patterns and operational drives, largely unexplored, but nonetheless challenging frontiers.

The general advantages cited for the open-end interview may be offset, however, by the difficulty in tabulating and evaluating the wide variety of responses. Then, too,

<sup>10</sup> E. Roper, "Checks to Increase Polling Accuracy," in *Public Opinion Quarterly*, 5 (1941), 87-90.

<sup>11</sup> H. C. Link, "An Experiment in Depth Interviewing in the Issue of Internationalism vs. Isolationism," in *Public Opinion Quarterly*, 7 (1943), 267-79.

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because the interviewer plays such an important role in drawing out the respondent, the results may reflect the opinions of the interviewers through suggestion.

Almost all critics agree, nevertheless, that the depth interviewing technique has great value in the early stages of a survey program in defining the issues, thus enabling the researcher to set up the specific poll questions. Interviewing of the future may see more and more emphasis on the skillful conversion of the depth interview into an interlocking system of traditional poll questions.

Some of the bias apparently present in the various forms of questions and answers may be obviated by the use of *attitude scales*. They have much to commend them, but have drawbacks too; at least, the big opinion polling organizations and commercial researchers have not used them extensively. A 1929 monograph by Thurstone and Chave<sup>12</sup> and a more recent study by Likert<sup>13</sup> will provide a good explanation of how they are constructed. The Thurstone method, the principles of which are basic in the newer scaling techniques, consists of an 11-point scale on which statements on an issue range in degree from favorable, through a neutral zone, to unfavorable. In order to assign each item its proper position on the scale a large number of statements are first sorted into 11 piles on the favorable-unfavorable continuum by a sizable number of judges. The median location of each statement becomes its scale value. The judges' variability in assigning the statements serves as a measure of each item's ambiguity. From 20 to 45 items of lowest variability are then

<sup>12</sup> Thurstone and Chave, *The Measurement of Attitude*.

<sup>13</sup> R. Likert, "A Technique for the Measurement of Attitudes," in *Archives of Psychology*, No. 140 (1932), 5-55.

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selected to form equal-appearing intervals on the continuum. The interview is administered by asking the respondent to check each statement with which he agrees and the median scale value of his checked statements thus becomes his score.

The paper by Likert suggests a modification of the foregoing in which the respondent checks one of five items pertaining to a statement: strongly agree, agree, undecided, disagree, and strongly disagree. This eliminates the sorting procedure, the scoring being done by assigning arbitrary weights of 1, 2, 3, 4, 5 to respective responses.

When a respondent is handed an attitude scale to check, a measure of the intensity of attitude is automatically recorded. Because intensity of feeling and tendency to act are apparently positively related, or the reverse, the weaker the emotion the greater the chance of changes in opinion, a measure of the stability of opinion is thus provided. This may become very valuable, for example, in forecasting a closely contested election when the difference in size of turnout or who will actually vote has an important bearing on the outcome. The possible disturbing effects of such factors as weather, roads, harvests, etc., on turnout may be weighed with greater confidence if the intensity of feeling on an issue is known.

Predictions can easily be made from attitude scales, but they do not lend themselves to the simple percentage reports with which we have come to be familiar. There are those, however, who believe that this is not unfavorable to scale scoring, pointing out the danger of reporting percentages as absolutes.<sup>14</sup> It is quite likely that the election

<sup>14</sup> Q. McNemar, "Opinion-Attitude Methodology," in *Psychological Review*, 43 (1946), 289-374.

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polling experiences of 1948 will bring about greater use of these scales, at least in a modified form, even though they take longer to construct and are more difficult to administer than the single-question type.

### QUESTION PHRASING AND PRETESTING

No set of rules yet devised will insure optimum responses in a given interviewing situation. One should make the questions as clear as possible—positive statements, couched in simple words and short sentences. Practice indicates the importance of using specific statements rather than general ones. Readership studies are based on specific queries, when, for example, instead of asking, “Which do you prefer to read in this magazine—fiction or nonfiction?” the interviewer asked, “Did you happen to read this particular story? Did you happen to read this particular article?” etc.

The student undertaking the construction of a questionnaire must not overlook the fact that some respondents will misinterpret questions. Even the simplest wording may be misunderstood. The words themselves often carry unwanted connotations or the respondent’s frame of reference may be entirely different from that visualized by the questionnaire designer. It is difficult to know the extent of such semantic misunderstandings, for too often they are undiscovered.

Occasionally these misinterpretations of questions offer a touch of humor—at least to an impartial observer. McNemar<sup>15</sup> tells of a case in which an unusually large number of Negroes told interviewers that they were opposed to government control of profits. A careful check on the

<sup>15</sup> *Ibid.*

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question showed they believed that God alone should exercise control of prophets!

Important, too, is the sequence of questions. The interviewer needs friendly, interesting questions to open the interview so that a sympathetic relationship with the respondent may be established. Much thought should go into the order of question presentation and a few trial interviews usually will suggest further improvement.

The effect which different question wording has on responses has been studied in the case of "prestige" symbols and emotionally toned words. This is done by presenting two comparable forms of questions—the split ballot. Some of the questions are the same in each form, thus serving as controls. It is not unusual for the different phrasings to yield different response distributions, particularly if the issues are not clearly defined in the respondents' minds. The question of which presentation yields the more exact report on the issue under examination is a troublesome one for opinion surveyors. Of course, in election polling the actual vote casting serves as a criterion for the evaluation of procedures, but one is not completely justified in applying the conclusions gained here to other fields of inquiry.

The split-ballot technique has been used to pretest the effect of the various question forms, and it is also the means of throwing light on the influence of deviations from "objective" wording. In this connection to check on the effect of prestige symbols the American Institute of Public Opinion asked three questions of comparable groups:

(A form) (8/9/40) Lindbergh says that if Germany wins the war in Europe the United States should try to have friendly trade and diplomatic relations with Germany. Do you agree or disagree?

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(B form) It has been suggested that if Germany wins the war in Europe the United States should try to have friendly and diplomatic relations with Germany. Do you agree or disagree?

	With Lindbergh	Without Lindbergh
Agree	46%	57%
Disagree	41	25
Don't Know	13	18

The inclusion of Lindbergh's name has reduced agreement to the proposition 11 percentage points and of course changed the "disagree" and "don't know" responses. Which return should be accepted? The answer to that depends on the issues being studied, and here we see the importance of a fundamental problem in the approach to scientific interviewing. Are we getting a respondent's opinion on the issue under investigation or have we inadvertently tapped other attitudes? Perhaps, if we characterized man as a "bundle of attitudes," as is sometimes done, we should not worry about garnering the full effect of a respondent's suggestibility.

The prestige factor is only one of several possible sources of deviations from objective wording which should be carefully checked in question wording. Payne<sup>16</sup> points out the apparently wide difference in public attitude toward social medicine shown between studies by the National Opinion Research Center and the Opinion Research Corporation. The latter organization set out to discover the technical reasons for the difference. By using split ballots on matched cross sections, some of the difference appeared to result from the tendency of respondents to give answers

<sup>16</sup> S. L. Payne, "Some Opinion Research Principles Developed Through Studies of Social Medicine," in *Public Opinion Quarterly*, 10 (1946), 93-98.



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about *ends* when the questions were intended to deal with *means*. That is, while 82 per cent thought something should be done to make it easier for people to pay for doctor and hospital care, opinion was nearly equally divided between support for group commercial insurance (39%) and Federal government (social security) (34%) as *means* to the desired end. A doctor-organization plan yielded 12 per cent.

The split ballot revealed that of those expressing a preference as to *means*, about one half said they felt sure of their preference, while an equal number said they would want more facts before deciding definitely. Opinion was clearly uncrystallized. Then, when three ballots were circulated, each carrying one of the plans in top position, the plan which appeared first received highest approval:

	When plan is presented first	When plan is presented after other plans
Insurance Company Plan	88%	82%
Federal Government Plan	72	64
Doctor-Organization Plan	64	58

Additional sampling substantiated the well-recognized fact that any single idea presented alone receives higher acceptance than when presented along with one or more other ideas.

Both polling organizations contributed to split-ballot studies on personalization of questions. The "would you want it?" or "speak-for-yourself-John" question yielded 32 per cent acceptance while "good idea" received approval from only 26 per cent. As to a choice between the two, Payne concludes that "if it were possible to word questions that would provide a balance between selfish and

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altruistic motives, the results would come somewhere between the two extremes." Nevertheless, the different ways of "slicing the issue" and their resultant variability of response brings us to the uncharted frontier of interviewing methodology.

### **THE INTERVIEWING PROCESS**

The validity of a survey depends greatly on the ability of the interviewers to do a competent job. The more complex the assignment the greater the reliance that must be placed on the intelligence and general tactfulness of the interviewers. How to get opinions that are free from interviewer bias should be the interviewer's principal concern. The interviewer should be aware that he can unwarrantably influence responses by his own attitude sets in seeking out his respondents, in presenting questions, and in recording answers, even though he is attempting a thoroughly objective job.

Seeking out friends or easily accessible homes which roughly satisfy the quota sheet's requirements can be easily rationalized by an interviewer. He should know that even a particular inflection of his voice in asking a question may induce a respondent to give an answer which he believes is wanted.

Both the commercial and public opinion polling organizations are placing emphasis on the careful selection and training of field workers with the result that a group of professional interviewers has been developed. A good interviewer is frequently on the assignment list of several research organizations and benefits from the experiences of a wide range of responsibilities. Some research directors, however, prefer to select inexperienced field

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workers and give them detailed personal instructions before they go on the job. It is important that all interviewing instructions be thoroughly understood. Some directors give their workers an examination over these points before the actual interviewing begins. In addition, a check may be kept on the internal consistency of a worker's returns or a check-back made on a few interviews, so that employment tenure becomes brief for the incompetent or deceitful.

The extent to which interviewers influence respondents, called interviewer bias, has been measured by requiring each interviewer to answer the interview questions himself and to mail them in before undertaking the survey. A check is then made on the tendency for interviewer and respondents to agree. A composite study of this kind on 51 questions asked by interviewers for the National Opinion Research Center between 1942 and 1946 has been reported.<sup>17</sup> As in almost all investigations of this kind, interview bias was evident to an extent greater than chance. But testing the actual distribution of interviewer-respondent opinion against the hypothetical distribution to obtain a "net effect" lead these experimenters to believe that final survey results were not "thrown off" seriously by interviewer bias.

One of the earlier experiments on interviewer effect was made by Rice,<sup>18</sup> who studied the lack of uniformity of certain answers given to two investigators by a group of homeless men. The "cause" of their destitution was

<sup>17</sup> D. Cahalan, V. Tamulonis and W. Verner, "Interview Bias Involved in Certain Types of Survey Questions," in *International Journal of Opinion and Attitude Research*, 1 (1947), 63-77.

<sup>18</sup> S. A. Rice, "Contagious Bias in the Interview: A Methodological Note," in *American Journal of Sociology*, XXXV (1929), 420-23.

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dominately labeled "liquor" or "industrial." It was discovered, however, in spite of apparent reliability of the sampling methods that marked disagreement existed between the returns of the two investigators. One interviewer, an ardent believer in prohibition, had indicated "liquor" the dominant cause, while the subjects of the other, considered a Socialist, had attributed unfortunate industrial conditions as the cause of their difficulty.

Baker and Stanton <sup>19</sup> conducted a laboratory study in which trained interviewers were directed to examine students to determine the extent to which incompletely learned material could be recalled. The interviewers were unfamiliar with the learned material but were provided with what they assumed to be the correct answers (some were false) in conducting their checkup. The interviewers' "knowledge" of the "correct" response systematically tended to bias the result.

Do interviews elicit answers that tend to favor the sponsors of a survey? In a carefully conducted field study using 22 professional interviewers Udow <sup>20</sup> found little evidence that knowledge of survey sponsorship made any difference in the reliability of returns. At the same time it was revealed that differences in the personal opinions of the interviewers did not vitiate the results brought back. Udow's work merits careful study from the point of view of his findings as well as from that of his experimental design. In this experiment interviewers were about evenly divided between B and C economic status groups so that when

<sup>19</sup> K. H. Baker and F. Stanton, "Interviewer Bias and the Recall of Incompletely Learned Materials," in *Sociometry*, V (1942), 123-234.

<sup>20</sup> Udow, "The Interview-Effect in Public Opinion and Market Research Surveys," *loc. cit.*, 1-36.

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each interviewed an equal number of B and C respondents, this factor was controlled.

Katz<sup>21</sup> made the economic status factor his experimental variable by matching a white-collar, or control group, of professional interviewers against a group of Pittsburgh steel mill laborers. He found that, particularly on labor issues, the white-collar interviewers did not have as good rapport with respondents as did those of the laboring class. Important differences appeared on labor union issues and in the expression of liberal-radical attitudes.

It is apparent that great importance is attached to the interviewer's ability to fulfill the quota sheet's exacting assignment. The question as to how consistently can interviewers rate respondents on such factors as age, income, or economic status naturally follows. Studies in this field are rather scarce. Mosteller<sup>22</sup> (chapter 7) asked field workers to reinterview a group of respondents. Both in this case and when different interviewers interviewed the same group the correlations were characterized as "high."

Requisite for valid responses apparently lies in the anonymity of the respondents. With the interviewer able to say at the beginning of his interview, "I am not interested in your name—only your opinion," many controversial questions are answered candidly that otherwise would bring distortions or refusals. The secret ballot, a method wherein the respondent "votes" his choices on questions and then places his "ballot" in a ballot box carried by the interviewer, has added further to the frankness of re-

<sup>21</sup> D. Katz, "Do Interviewers Bias Poll Results?" in *Public Opinion Quarterly*, 6 (1942), 248-68.

<sup>22</sup> Cantril, *Gauging Public Opinion*.

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spondents' replies, particularly in situations where a truthful answer might endanger social or economic status. Turnbull's experimental study <sup>23</sup> (chapter 5) of secret vs. non-secret ballots revealed important differences on a number of questions. Inquiry into how these differences are affected by respondents in different economic, educational, or occupational groups remain for future study.

It is true that interviewing as now practiced is far from being a mechanical process or an exact science. After the 1948 elections a number of newspapers abandoned the practice of reporting polls and many persons predicted the demise of attempts to predict voting behavior. But one of the basic objectives of science is to enable us to predict the time, place and general outcome of "events" in the future; we work for that distant day when nothing that nature permits to happen will be entirely unexpected. Social scientists are convinced that the basic polling methods are sound ones. They are aware that the failures in any field of science often teach more than the successes. While it is not defensible to fix the full magnitude of the 1948 election prediction on any single cause, much was learned that will improve polling research in all fields. For example it was demonstrated once again that it is unwise to set up immutable "truths" that are beyond question. Apparently national elections are not definitely decided in the minds of voters in July or earlier, barring a major overt act; the "undecided" vote will not necessarily distribute itself like the "known" vote, and so on.

The bases for rejecting positive statements like these are to be found in the basic philosophy of science; namely, in the need for "dating" statements of "fact" and in the

<sup>23</sup> *Ibid.*

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need of recognizing the principle of constant change in everything. Because we have erred in the collection or in the interpretation of our data, or in both, should not cause us to abandon effort. That much work remains to be done was indicated by the National Opinion Research Corporation, before November, 1948, when it prepared a condensed summary of suggested projects needed to solve certain interviewing problems. The list covered 10 type-written pages. A manual of instruction<sup>24</sup> published by this organization for its staff of interviewers is the most thorough compilation of its kind and one which every student of questionnaire interviewing should study closely.

### **SUMMARIZING THE DATA**

If a survey has been well planned in the beginning, the processing, summarizing and drawing of conclusions can be a reasonably simple task.

For large-scale operations each respondent's answers are frequently punched, or coded, on a separate card and a sorting machine used to sort the cards into any desired combination of groups. The processing and interpretation of data becomes increasingly complex to the extent that open-end questions have been used in the survey. Insight and good judgment are necessary here to reveal the significant relationships in over-all design that may exist in the tabulated data. In other words, the time arrives to tell what the revealed facts mean.

Conclusions drawn from an interview study must carefully take into consideration the scope of the questions asked in order not to exaggerate facts. In other words the researcher must guard against reading into his conclusions

<sup>24</sup> National Opinion Research Center, *Interviewing for NORC*.

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any attitudes of respondents which the questions did not elicit.

In phrasing conclusions based on sampling methods it is well for the researcher to remind the reader that the conclusions do not extend beyond the group on which the study was based. If a study has been made of students in a certain university one should not state that the opinions are representative of *all* university students.

It is important in summarizing data to set forth clearly the total number of cases used, as well as the number in the subsamples, if reliability is to be placed on the returns of the smaller groups. Measures of variability of the percentages reported are based on the size of the sample, but these measures are frequently considered too abstract for general reading reports with the result that readers are lead to infer an unwarranted confidence in the published data. Qualifying statements, inherent in any report based on probability formulas, should not be omitted in an attempt to popularize or abstract scientific reports.

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## 5. Content Analysis in Mass Communication

FAY DAY

Columbia Broadcasting System

In determining the effect of communications in any medium upon the group which it reaches, one of the primary steps is an evaluation of those communications, or of the contents of the medium, in terms of the problem under investigation. During the past decade this step has developed into a specialized field in communications research known as *content analysis*. It is one of four main divisions of communication media analysis: (1) Control analysis or who controls the media; (2) Content analysis or what the media contains; (3) Audience analysis or who is exposed to the content as revealed for example in readership and listenership studies; and (4) Response analysis or what the effect and reaction is to the exposure.

Today content analysis is being used extensively by governmental departments interested in public opinion in foreign countries. One of the most effective means by which the Department of State has been able to ascertain the effects of its Voice of America broadcasts, has been by studying the contents of newspapers and radio broadcasts in those countries to which the U.S. broadcasts are being

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beamed. It was discovered that, if the broadcasts accomplished nothing else, they forced the controlled press and radio in those countries to publish news stories that they otherwise never would have published.

However useful such analyses may be, they consist of subjective studies of the foreign press and radio by persons well-acquainted with those media. No attempt is made to define the contents in a uniform and consistent manner. Content analysis in the mass communications field, especially, has come to require the use of carefully defined categories for classifying the contents of the media and the use of some type of quantitative measurement.

Impetus was given to this aspect of the communications process by the Experimental Division for the Study of War Communications during World War II under the direction of Harold D. Lasswell and associates. These studies were concerned with the nature of the media contents which were being brought to the attention of the public in the United States and other countries.

Conspicuous among governmental activities in this approach to content analysis were also those of the Media Division of the Office of War Information. In 1942 under the direction of Dr. Ralph O. Nafziger, that division developed an extensive system for such analyses. Continuing studies were made of the editorials and cartoons in a sample of daily newspapers, of the leading newspaper commentators, of articles and editorials in the leading magazines, of editorial comments by the leading radio newscasters, of motion picture newsreels and war program shorts, and of editorial comment in the labor press. The contents of all these were analyzed under a master category list and according to a well-defined standard for de-

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termining direction, i. e., favorable, unfavorable, or neutral.

Outside of the government there have been numerous studies of specific problems but no continuing studies on such a scale as that attempted by the Media Division. The Columbia Broadcasting System in conjunction with its tests of programs with the Stanton-Lazarsfeld Program Analyzer makes extensive analyses of the contents of radio programs.<sup>1</sup> The National Association of Broadcasters has made several analyses of radio station program schedules. Also, several analyses have been made of program schedules for presentation at hearings on radio station construction permits before the Federal Communications Commission.

Only a few analyses of motion pictures have been published.<sup>2</sup> This field will become increasingly important as the closely related field, television, exerts a greater influence upon public opinion. Television newscasts, especially, will become an important factor in the formation of public opinion and the need will arise for valid techniques of content analysis in this new medium.

There have been numerous content analyses of history books, pamphlets, textbooks, fiction magazines, and other media outside of the mass communication group. Such studies have not had the immediate interest in the field of journalism, however, as those in mass communication media.

The techniques for content analysis in the field of mass

<sup>1</sup> Paul F. Lazarsfeld and Frank Stanton, *Radio Research, 1942-43*. (New York, 1944).

<sup>2</sup> Marjorie Fiske and Leo Handel, "Motion Picture Research: Content and Audience Analysis," in *Journal of Marketing*, 11 (1946), 129-34.

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communications vary with the purpose and with the media. Students of public opinion, especially Dr. Harold D. Lasswell and his associates, have attempted to develop a technique that could be applied with equal validity to all media and all different types of problems.<sup>3</sup> These efforts have been only partially successful, for while it is feasible to adopt a uniform system of categories for a particular problem, each medium requires a distinctive technique. This is especially true if a measure of direction is being attempted.

### CONTENT ANALYSIS METHODS

There are three basic scientific methods that have been used, with variations, on all mass media. They are (1) basic subject matter analysis, (2) symbol coding, and (3) scale measurement.

Of these the analysis of *subject matter* is by far the most common. It consists of grouping the various editorial items and news stories by subject matter into categories pertinent to the problem being studied. These categories may be used for classification of the material in filing, especially in the case of a continuing study. Specific lines of criticism are used for the quantitative tabulations and to illustrate the direction. In a study of a specific problem these lines of criticism may serve as the categories, also.

*Symbol coding* hardly has passed the experimental stage, but it represents an attempt to simplify the analysis by subject matter and to speed up the process by counting only "symbols," or significant words. For example, by counting the number of times that the word "Germans" ap-

<sup>3</sup> Harold D. Lasswell, "The Politically Significant Content of the Press: Coding Procedures," in *Journalism Quarterly*, 19 (1942), 12-23.

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pears (or words like "Germany" or "Western Zone") and coding them as favorable (+), unfavorable (—), or neutral (o), one may determine the amount of attention and the direction that is being given to the subject of Germany in the media under investigation.

The number of times that words are mentioned, however, may be misleading because of the many variables that control word usage. These variables are so unpredictable in particular publications that standards for comparison can be established with little assurance of validity. This method helped to develop modified forms of symbol coding, however, in which phrases, sentences, or paragraphs serve as the unit for coding.

Two examples of these modifications were undertaken to supply evidence at hearings before the Federal Communications Commission. In one instance a series of eight categories pertinent to the subject under investigation was adopted, shading from favorable to unfavorable.<sup>4</sup> The frequency with which items on the subject appeared in a newspaper fitting into each category was recorded and reported upon by the investigators.

In the second instance, the analysis of radio scripts was based on three dimensions; the broadcasts themselves or the appearance of the subject matter under investigation in each broadcast, the content of the paragraphs in each script, and the lines devoted to the pertinent subject matter.<sup>5</sup> References to Labor subjects were investigated in

<sup>4</sup> Memorandum submitted by the American Jewish Congress before the Federal Communications Commission (Docket No. 6175), in re application of News Syndicate Co., Inc., New York, for Construction Permit for an FM Station, Nov. 12, 1946.

<sup>5</sup> Testimony by M. D. Stewart before the Federal Communications Commission re United Broadcasting Co., Columbus, Ohio, WHKC (Docket No. 6631), pp. 555ff of transcript, August 1944.



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this study. By proceeding in accordance with a carefully planned analysis results were obtained in terms of the following dimensions: 1. *Attention*, or the proportion of lines, paragraphs and broadcasts in which the Labor topics were discussed; 2. *Subject Matter*, or the proportion of Labor content devoted to different specific subjects; 3. *Themes*, or the frequency with which statements or collections of words were repeated in the broadcasts; 4. *Direction*, in terms of favorable, unfavorable, neutral, balanced for lines, paragraphs and broadcasts; 5. *Type of Content*, in which Labor references were divided in those purporting to be statements of fact, statements of opinion, statements of attributed opinion or quotations. These three dimensions were broken down further by attributes of the types of content (favorable, unfavorable, neutral) and by Labor subjects and their attributes.

Any one of the five main dimensions may be the only and specific objective of a content study. For example, theme analysis has been used frequently to study the propaganda content of various publications or utterances. During World War II, government agencies analyzed themes in certain publications which were suspected of being subversive in terms of their agreement or disagreement with established Nazi propaganda themes.

*Scale measurement* is a specialized technique that has been used for the summarization and interpretation of the answers to open-end questions in opinion questionnaires.<sup>6</sup> Experimentally it has been adapted to content analysis, but not in any large-scale study of mass communications.

<sup>6</sup> Louis Guttman, "Suggestions for Further Research in Scale and Intensity Analysis of Attitudes and Opinions," in *International Journal of Opinion and Attitude Research*, 1 (1947), 30-35.

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With any technique, because of the sheer volume of material in mass communications media, the analyst must select pertinent portions for study. He must limit his study to certain media, to representative items in those media, and to portions of those items.

The Media Division of the Office of War Information conducted extensive studies of domestic mass communications media, but even with relatively large funds from the Federal government at its disposal, it was forced to limit its studies to editorials, cartoons and news commentators in about 30 newspapers and the editorial comment in the labor press. Studies of magazines were restricted to articles on contemporary affairs. Motion picture newsreels and war program shorts were covered, as were also radio networks commentators.

It was recognized that the selected media did not adequately cover the entire field. Nevertheless, since it was intended to be a study of *mass communications*, the selected portions presented a representative picture of what the important public opinion forming groups were presenting to the U.S. public.

### ANALYSIS OF EDITORIAL COMMENT

To handle the large volume of printed matter in newspaper editorials, a technique was devised which involved abstracting the editorials on five-by-eight-inch paper for summarization and filing. A reader went through the editorials and the commentators' articles in the newspapers and underlined passages which described adequately the lines of criticism developed in the editorial. The reader made a marginal note which classified the type of comment. For example, an editorial on the Second Front in

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Europe was classified under "Military—Europe—Second Front." An over-all classification index was developed within four categories, "Military," "Economic," "Political," and "Ideological," to guide the readers in this process.

Typists abstracted the underlined phrases and sentences on the five-by-eight sheets with sufficient carbon copies for necessary cross references. The abstracts were collated by categories and analyzed for weekly reports to government officials.

The validity of this technique depended, first, upon the ability of the reader to select passages from editorials that would represent the lines of criticism, and, second, upon the reliability of the analyst in his interpretation of the data for his report.

The Media Division operated not unlike the city desk of a large newspaper in that a senior analyst was assigned to edit the reports as they came across his desk. In this way not only was it possible to present the reports in a uniform style, but it was also possible to train the analysts in the writing of reports.

The magazine editorials and articles on contemporary affairs were handled in much the same manner as the newspaper editorials.

Commentary by radio newscasters presents a different problem from the contents of newspapers and magazines since it does not ordinarily appear in an accessible record. The newscasters almost always read from scripts, which are not generally available to the analyst. It is necessary, therefore, to make recordings of the news broadcasts which are being investigated to assure validity of the study. The Media Division used dictaphone recordings

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of entire news shows. A monitor marked on a specially prepared strip of paper alongside the disk the sections devoted to comment. These were transcribed by a typist. Monitors trained in stenography can also record in shorthand notes the remarks on subjects under study. The first of these procedures is time-consuming and expensive. The second method is less expensive, but perhaps less valid and accurate.

Today, magnetic tape recorders offer a less expensive, and perhaps more valid, technique. A monitor trained to recognize the type of commentary in which the analyst is interested could operate the recorder. Since these machines are easily stopped and started, the monitor could record only the portions pertinent to the study.

The recorded remarks could be typed item by item on separate sheets and classified according to categories and lines of criticism for summarization and interpretation. This technique would provide the analyst with a convenient recording of the comments to which he could refer to ascertain the voice inflections on key passages. The inference of the newscaster's voice often may be as important as the actual spoken words.

The transcribed portions should be transcribed by "items." In one study the following definition was used for a radio news item: "One or a series of sentences about the same subject or events with a distinct pause before and after, indicating that the commentator was coming to something new."<sup>7</sup>

These comments should be summarized and interpreted in accordance with the various lines of criticism, whether

<sup>7</sup> Leila A. Sussman, "Labor in the Radio News: An Analysis of Content," in *Journalism Quarterly*, 22 (1945), 207-14.

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favorable, unfavorable, or neutral. The number of newscasters and their names should be given for each line of criticism. It would be desirable, also, to indicate the size of the audiences of the various commentators as provided by a national rating service.

### INVESTIGATING NEWS CONTENT

The presentation of the news in newspapers and by radio has been the subject of several studies during the past few years. It is in this field that Dr. Lasswell's symbol coding technique has been used most extensively.<sup>8</sup> It has the desirable characteristic of reducing all media to a common base. The count of the symbols for each publication or radio program should be expressed in proportion to a total count of all symbols from the master category list that has been developed by Dr. Lasswell and his associates.

The use of one category list for all types of studies seems, however, to have great limitations, and the mathematical errors due to the variations in the total number of symbols in different issues of the same publication probably would not average out in the small samples that are generally used in content analysis. However, it can be used as an indicator of greater or lesser attention which is being given a particular subject, to be confirmed or disproved by a more thorough investigation of the subject at a later date.

In studying the news content of newspapers and magazines, the most common method is a measurement of the column inches of space devoted to the subjects under scru-

<sup>8</sup> Harold D. Lasswell, "The World Attention Survey," in *Public Opinion Quarterly*, 3 (1941), 452-62.

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tiny. Publicity men long have measured their successes and failures by this method. It also has been used in more thorough studies of press treatment of particular subjects.<sup>9</sup>

However, readership studies have indicated that the measurement of space is often more misleading than helpful in appraising the content of newspapers or magazines. The procedure is also too time-consuming to warrant its use if a number of newspapers and a large number of subjects are to be investigated.

Moreover, in analyzing the contents of a newspaper, the headlines often prove as important as the news stories. The headline sometimes takes a stand on a controversial issue, while the news story under it is unbiased. Here is an example of a headline under the category "Greek Civil War," which is "favorable" to the Greek National Army:

### BIG GREEK ATTACK AIMS TO END WAR

National Army is Battling to Surround  
and Cut Up Foe in Grammos Region

This headline, as far as the impact on the reader is concerned, is probably more important than the story. At least, the reader is preconditioned by the headline. For that reason, an analysis of the headlines in the American press is often sufficient to reflect a picture of the news content. Such studies may, in fact, be confined to the front page of a full-sized newspaper and the first three pages of a tabloid.

A study by W. Phillips Davison<sup>10</sup> of the Soviet-con-

<sup>9</sup> Neal O. Hines, "Atomic Energy and the Press: Two Years After Hiroshima," in *Journalism Quarterly*, 24 (1947), 315-22.

<sup>10</sup> W. Phillips Davison, "An Analysis of the Soviet-Controlled Berlin Press," in *Public Opinion Quarterly*, 11 (1947), 40-57.

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trolled Berlin press in 1946 illustrates how the various themes in the headlines may be tabulated and the direction of the themes indicated. A category list should be developed, however, for each particular problem under study.

In analyses of radio news presentation, the measurement also should be in terms of "items," and the direction should be indicated. The inflection of the speaker's voice may be quite important. If an indication of direction, i.e., favorable, unfavorable, or neutral, is being made, the use of a tape recorder is recommended. The record assures that the analyst will hear the broadcast and will recognize any slant given to the news by voice inflections.

Does the position of an item in a broadcast present a problem? No conclusive studies have been made to give the analyst an answer to this question. An unpublished study of the author suggested a high correlation between headline placement and readership of news stories. Even though there probably is some reason to believe, therefore, that newspaper headlines should be weighted in accordance to their placement on the front page, no valid system for doing so has been developed.

In some studies of radio news the arbitrary rule has been adopted that the news items mentioned should be given preferred weight. However, studies of radio programs<sup>11</sup> seem to disprove that assumption by indicating that interest may increase as the program proceeds. In the absence of conclusive evidence in support of a system of weights, all news items on the same newscasts should be weighted equally. It may be desirable, however, to indicate the relative audience sizes of the newscasts just as it may be

<sup>11</sup> *Ibid.*

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useful to show the circulation figures of publications which have been analyzed.

In all studies of news content the "significant omissions" must be watched carefully and various media or publications compared with one another. The analyst must avoid, however, comparing the news content of a radio program with that of a newspaper or with a publication serving a specialized group.

## FIELDS FOR FUTURE STUDY

The National Association of Broadcasters sponsored a study of public opinion toward radio in the United States in 1945<sup>12</sup> and 1947.<sup>13</sup> Concurrently, the research department of the association under the direction of Dr. Kenneth H. Baker made an analysis of the program schedules of a representative sample of United States radio stations. With the results of the public opinion polls and the analyses of the program schedules, the broadcasters are in a position to compare what the American public wants from radio with what is being broadcast.

The American press might well follow the lead of the radio organizations. Content analyses and public opinion polls could establish basic and important information for newspapers by determining the relation of newspaper content to the response or reaction of the readers.

Making a content analysis of a representative sample of 100 daily newspapers for one month concurrently with a national poll of public opinion would be an appropriate ap-

<sup>12</sup> Paul F. Lazarsfeld and Harry Field, *The People Look at Radio* (Chapel Hill, 1946).

<sup>13</sup> Paul F. Lazarsfeld and others, *Radio Listening in America* (New York, 1948).



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proach to the problem. The analysis could be limited to the front pages, the editorial pages, and the editorial commentators. Concurrently an analysis could be made of the newscasts of the leading radio network news shows. Newspaper readership studies and circulation and audience data should contribute to the final interpretations.

In summary, an important aspect of the process of communication is the content of communication, and that content must be described carefully and clearly. This developing field of analysis offers objective and systematic techniques for accurate descriptions of content. The functions of this type of analysis have been expanded greatly in recent years, and various methods have been adapted to the many uses of content analysis.

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## **6. The Experimental Method and Communications**

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It is unfortunate that familiarity with some of the methods of the physical scientist may in some instances lead to confusion rather than to greater understanding. One who has learned to respect the meticulousness and the objectivity of the chemist is too often prone to forget that none of the physical sciences, and certainly none of the social sciences, is complete in itself. Every real science is a part of the larger science which embraces all human knowledge and when Bacon said, "I take all knowledge to be my province," he was recognizing the interrelationships of all branches of learning.

The philosopher believes that all science—all human understanding, in fact—grows out of philosophy. Whether one accepts this thesis or not, he is required by his knowledge of the history of the physical and social sciences to agree that each of them has sprung from philosophy, and he is forced by his technical knowledge of the sciences to conclude that none of them is a completely distinct area of learning. There is much physics in chemistry and vice versa.

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There are both physics and chemistry in zoology, botany, geology and geography. The relationships of the physical sciences are too obvious to need further definition.

Since journalism, insofar as it partakes of the character of a science, is to be considered a social science rather than a physical, the journalist is chiefly interested in those research techniques which have proved most valuable to the social scientist. Here again, it is unfortunate that a little familiarity with the work of the social scientists too often leads one to think that sociology or political science or history is a distinct division of knowledge. This is distinctly untrue. There is, if anything, a closer and more relentless relationship between the social sciences than there is between the physical sciences. Furthermore, the social sciences are so patently derived from philosophy that the journalist should expect greater help from the parent science than from the derivative.

Philosophy and the philosophical method are essential to journalistic research. There should be no confusion in the mind of the journalist, however, between *logic* and *speculation*. If there can be any comparison between the usefulness of sheer *speculation* and *scientific experimentation* it must only emphasize their dissimilarities. Speculation is too likely to be random wandering in the realm of thought, and the chances that without direction a solution may be discovered are the chances of accident. Logic, on the other hand, enforces orderly processes of thinking, proceeding from the known manifestations of a law to its application in another situation. Journalistic research has had more than its share of pure speculation, something less than it deserves of logical reasoning.

The careful and efficient use of the experimental method

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in research in journalism promises to eliminate some positive faults in present practices :

- a. the substitution of scientific trial and observation for utter speculation
- b. the elimination of conclusions based only on opinion
- c. the formation of hypotheses by logical processes
- d. the testing and verification of hypotheses by accurate observation
- e. the testing of authoritarian precepts in studied practice.

Why does the teacher of copyreading insist that his students avoid a preposition at the end of a line? Is it because he has scientific proof that a headline so constructed is less intelligible to the reader? Probably not. It is because he has read a textbook that frowns on prepositions at the ends of lines, or he has reached a conclusion after introspection regarding his own reading habits. Why does the teacher of reporting force his class into a strait jacket, imprison both their native imagination and their acquired writing ability, and permit them to turn out only the standardized pattern of a news story? Because he has scientific evidence that readers prefer that kind of story? Not at all. It is because he sees that kind of story used so often, and *assumes* that it is the best form.

To carry this matter into the realm of journalistic practice : Why does the news editor of a city daily play a banner line above the sordid tale of scandal? Is it because the sale of the paper actually depends upon the startling effect of a streamer, or is it simply because he has been taught by those in authority to "force a line"? Do readers prefer front page to inside page editorials? What page in a paper actually gets the most readership? What are the common

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patterns of readership? Why are the comics rated so high? What kind of story will get as good readership on page 8 as on page 1? Will the "striking" advertisement headline capture more readers than the "problem-solving" type? Will the highly emotionalized copy theme get more readers than the human interest theme? What is the relationship between size and attention among illustrations? What reading difficulties, quantitatively measured, are involved in various publications? These questions—every one of which can be answered by simple, though careful, experimentation—cannot be resolved by speculation nor disposed of by an official rule of shop practice.

In the field of radio, partially because it is so new, the experimental method offers an abundant reward for very meager efforts. In radio, even more so than in publication work, the voices of authority have been so loud that truth discovered by scientific research has often been ignored, frequently resented, and sometimes held to ineffectuality. What is the relative effect of the long and the short commercial? Is the one-minute spot announcement a less or greater stimulus to buy than the elaborate commercial? How many people are disgusted with singing commercials? What is the optimum length of a news broadcast? What differentiates a worthy from an unworthy daytime serial? Is there too much, or too little music in any given program? How well does listening reflect the satisfaction of the public with present programming? Although it is more difficult to obtain accurate evidence applying to any of these problems than it is to test the pulling power of printed media, it can be done by relatively simple procedures.

The chief advantages, then, of the experimental method



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in journalistic research are its adaptability and its accuracy in finding the truth.

### DISADVANTAGES OF THE EXPERIMENTAL METHOD

There is no universally perfect method in science. Experiment will never perform miracles. It will never of itself determine the fundamental values of any certain practice in the field of newspaper, magazine, radio, or any other kind of communications. Briefly stated, additional disadvantages of the experimental method for journalistic research will include these:

- a. The method *looks* too easy, and thus is usually invalidated by errors of carelessness.
- b. Experiment can tell (1) which of two methods is best, or (2) in what degree each method achieves its purpose, but it never can tell (3) whether any of the methods ought to be employed.
- c. Only incidentally does the experimental method discover *new* ways of performing a task, because it is so often based on present practices. However, it is readily adaptable to the discovery of new practices if a logical hypothesis is the basis of the trial.
- d. Experiments dealing with large samples of the universe may completely obscure individual differences that are as important as, or more significant than, the mass tendencies.
- e. Results of an experiment today may not be true tomorrow, or next week, or next year.

The ease with which a simple experiment may be set up leads sometimes to the erroneous impression that validity in experimentation is automatic. The facts are that a hundred variables may be operative in the simplest kind of

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trial and error. For example, it might be assumed that all one needs to do to learn which page of the newspaper is most important is to see which page 100 persons turn to first. But there are many possibilities for error. A sample of 100 persons may be far too small; it may not be typical, even of one segment of the newspaper's readers; it may not cover the right age groups, or the right economic groups, or those with typical training and education; the observation may be inaccurate because the weather is cold, or it is raining, or it is too hot for comfort. And lastly, we must remember that we proceeded from an assumption that was not proved to be true, and regardless of what we find, it may add nothing to truth.

In the evaluation of each of several journalistic practices, the experimental method will not give critical results. Experiment will show whether a streamer headline above a scandal story will attract more street sales than a streamer over a story of a murder—but it will never tell us whether either of those stories should have been given that emphasis. Philosophy is still needed to determine fundamental values; experiment to test their application.

New and better methods *may be* discovered by experiment, but since there can be no testing until there is something to test, it is obvious that the concept must precede the trial. In short, there must be a logical thesis determined by orderly thinking before the experiment.

Magnitude of sample is no guarantee of validity. Neither is it an assurance of worth in the results of an experiment. It might conceivably be more important to study intensively the reading pattern of one housewife, than to learn a little about the reading pattern of 1,000 women.

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Yet, to avoid so far as possible those errors which creep into the process when the experiment is limited, it is customary to employ large numbers. In so doing, important values may be entirely obscured; there are always many that are not discovered.

There is a tendency, once one is convinced of the soundness of the experimental method, to regard results as the word of God. By the nature of this procedure, no one test and observation—no series, in fact—can be regarded as absolute proof that another series of tests and observations tomorrow, or next year, may not discover a new principle. Consider, for instance, the relative news value of a murder when (a) the country is at peace and (b) when the country is at war. This constant fluctuation in public attitudes is extremely significant in all journalistic research. What we discover today may be wrong next week if conditions change materially.

## ESSENTIALS OF SCIENTIFIC EXPERIMENTATION

There are three kinds of experimentation:

(1) *The Informal*. This is sometimes called the "trial and error" method, although not with exactness, because trial and error is necessary in almost every experiment. It might better be called a trying out of a new or different procedure and, if entirely informal, it also implies (a) the lack of any orderly process, and (b) no attempt to keep accurate records of the results or, in fact, to measure them. For example, a publisher decided one day that there was no function for column rules and ordered them dropped out of the front page for one week, then reinstalled for one week, and then dropped out and run on alternate days for a two weeks' period. At the end of the four weeks of

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"informal experimentation" he concluded that column rules were unimportant because "only seven people mentioned the fact to me that we had changed our makeup."

In this instance there was no attempt to stabilize any of the other factors in makeup, or to test the reaction of the public to the change by means of interviews, questionnaires, or any other device, and no records were kept. Such instances may have some value but they are not contributions to accurate scientific knowledge.

(2) *The Controlled or Laboratory Method.* In this kind of experiment every possible effort is made to keep all circumstances the same, or equivalent, during the course of the experiment, permitting only the "experimental factor" to change. This is the technique of the chemist and of all pure scientists. It would completely invalidate the simplest test in qualitative analysis, for example, if the experimenter were to use ordinary tap water instead of distilled water from a chemically clean vessel, drawn through a chemically clean tube into a chemically clean beaker. All materials used in the experiment must be chemically pure, or refined to a degree of purity that meets a specific standard.

In journalistic research the controlled experiment has been used much less than its proved dependability would justify. The reasons are not far to seek. In the first place, it requires scientific apparatus which has not often been available. In the second place, it requires a great deal more preparatory time than, for instance, the use of the questionnaire or the interview. In the third place, it requires the person in charge to be competently trained in scientific measurement and in scientific method. In the fourth place,

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it requires stabilization of conditions which have often been beyond the control of journalistic researchers. In short, research in journalism has seldom used the controlled experiment because we who do this research have not been masters of the circumstances, and because we have often lacked the necessary training.

(3) *The Naturalistic or Field Study.* This method involves the observation of a phenomenon as it actually occurs. It has the advantage of supplying a real situation for one that is created in the laboratory, but it has the disadvantage of eliminating almost all possibility of control of variable factors. A single example in journalistic research will be sufficient to describe this method.

In charting the pattern of readership of commuters riding trains from the suburbs into the business district of a large city, the experimenter obviously was required to limit his observation to commuters actually en route. To avoid exciting suspicion and also to avoid placing his subjects "on guard" he had to remain unobtrusive, and so could not take up the greatest vantage point in the car. He could not choose his subjects but was forced to observe those who sat in the seats adequately covered by his vision. He could not choose his time, for commuters ride mostly during the rush hours in the morning and evening. There was no way to determine whether the commuter had just bought his paper, or had read it at home, or had borrowed it. All of these shortcomings of the naturalistic setting could have been eliminated by another method, but the actual situation gave positive values, such as completely uninhibited reading, that could not be obtained any other way.

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### BASIC ESSENTIALS OF A SCIENTIFIC EXPERIMENT

Speaking specifically of the controlled kind of experiment in journalistic research, the following basic essentials must be present for success :

(1) *A Suitable Subject.* This may be one person, a small group of persons, a certain segment of the population, or all the individuals in a certain category. In some rare instances in journalistic research the subject may be inanimate.

(2) *A Trained Observer.* No one should attempt to supervise, govern, and interpret an experiment unless and until he is expert in the methods himself. Accurate observation is not a native talent, although the mental alertness, the curiosity, and the keenness of vision that make for good observation may be native.

Recently great popularity has come to a kind of reader-interest study which depends upon interviews with a selected and variously stratified sample of the reading population of a given newspaper. The method looks so easy that it has been attempted by a good many persons who have had no experience whatever, either in selecting a representative sample or in the actual interviewing of individual readers. The studies, for these reasons, have lacked the validity they could have possessed if the one who directed others in the science of reader-interest analysis had been adequately trained, first, in the principles of scientific accuracy, and secondly, in the technique being employed.

(3) *Adequate Materials and Apparatus.* There is a common misconception that the best work in science is done with crude instruments, arising, no doubt, from the fact

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that men like Pasteur and Edison constructed their own apparatus from crude materials. This is not a complete truth, for while these men may have started with crude materials and simple machines, they did their best work, as everyone does, with the best machines they could learn to build.

Good journalistic research demands good materials and good apparatus, too. Both have been hopelessly inadequate, no less in the laboratories of Schools of Journalism than in the plants of publications and radio stations. Even an adding machine has been a wondrous luxury to many a journalistic researcher. Ordinary business machines which are designed to do fast and accurate tabulating have not always been available. And the request for funds to construct any kind of new apparatus has been regarded unfavorably if not with downright suspicion.

Among the undesirable results of this almost universal famine of adequate materials and instruments available to journalistic researchers has been the tendency to embrace projects that required no apparatus. Unfortunately, too many such projects have been little more than haphazard guesses and their results prove nothing at all. A ready example is the alleged "public opinion poll" which anyone may whip up on a moment's notice by asking one or two questions of the first 50 persons he meets. Better materials, some precise measuring instruments, and some functional apparatus will, it is hoped, improve the accuracy of future journalistic research.

(4) *Complete Control of the Factors Influencing an Experiment.* It logically follows that a researcher trying to perform without adequate materials, suitable machines, and precise measuring instruments is hardly master of the

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numerous variables that may influence his results. Few journalistic researchers have laboratories in which the light can be controlled within 10 foot-candles on any day of the year. That, it would seem, is one of the simpler requisites of a scientific laboratory, dealing largely in reactions to visible stimuli. The governing of relative humidity, temperature, and pressure—all considered basic essentials in experiments in physical science—is almost unheard of in journalistic research. Yet it will be seen from the discussion of errors which follows that all of these factors, and many more, are likely to invalidate any procedure unless they are strictly governed. Conditions must be kept standard.

(5) *Standardization of Methods for Experiments in a Series.* The slightest variation in technique in one small experiment may invalidate a whole series. Since the results of the series will probably be reported in average values, or the arithmetic mean, an error in one experiment is certain to influence the results, though ever so little.

To illustrate this point, let us suppose that the legibility of type faces is being tested by exposing a series of cards with comparable printed messages to a series of subjects. Some of them will be tested today, some tomorrow, some on succeeding days. The effect of varying the lighting of the room, particularly the illumination on the cards, is too obvious to need explanation. (Less obvious, but no less real if we had instruments precise enough to measure it, is the effect on the subject of permitting the temperature of the room to get below 65 degrees or above 80.)

(6) *Systematic Procedures.* An experiment that is not conducted according to a plan, in an orderly, methodical manner, is not scientific. No good experiment, in fact, can



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be done without system. It must be systematic in order to:

- a. ensure uniformity of procedures with different subjects
- b. ensure comparability of results
- c. make efficient use of both subject's and observer's time and energy
- d. prevent distractions that might change the results
- e. provide material for comprehensive records
- f. eliminate all possible errors
- g. permit later investigators to verify the experiment
- h. serve as the basis for further experiments.

## ERRORS IN SCIENTIFIC EXPERIMENTATION

Regardless of the care with which an experiment is conducted, every procedure separately and the total results are subject to error. These errors are of several kinds, some inherent in the procedures themselves, some accidental, some expected but unavoidable. They are classified as follows:

(1) *Normal Error*. This is the error that results from imperfections of measurement of any magnitude. For example, the same observer weighing a given quantity of a substance on a finely graduated scale several times is likely to get a different result each time. Effects of temperature on the scale, inability of the observer to estimate fractions accurately, looking at the scale from a different angle, and many other factors will cause these variations. Such differences are usually small and they usually distribute themselves fairly evenly on both sides of the correct weight of the substance. It is easily proved, statistically, that these differences above and below the mean—in a normal distribution of variates—will group themselves in the form

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of the *Gaussian Curve*, which is also called the *Normal Error Curve*. In every experiment where a series of measurements are necessary, the normal error curve should be determined.

(2) *Estimates of Variability*. The standard deviation is considered the most reliable measure of variability, that is, of the variations from the "average," "mean," or "central tendency" in frequency distributions, and for that reason is commonly used in research. The standard deviation is the square root of the mean of the squares of the deviations from the mean. Just as the researcher may find the *mean*, *median*, and *mode* of a frequency series to show the central tendency, he should find the *range*, *average deviation*, *standard deviation* or *quartile* to show how much the series varies from the central tendency. Of these measures of variability, the standard deviation is likely to prove most useful. It may be calculated for any frequency series by a relatively simple formula available in elementary books on statistics.

The importance of understanding the normal error curve, the standard deviation, and the probable error, so far as journalistic research is concerned, is that the normal error curve is the basis upon which samples of the population are selected to represent the entire population. This principle is commonly applied in many journalistic public opinion polls.

In addition, the best practice calls for an understanding of the nature of statistical probability as expressed by levels or limits of confidence. Whenever samples are used, final figures are always subject to a margin of error. These errors can be accounted for by mere chance. Simple formulas are available for estimating these normal errors,

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and results should be presented together with the estimates of sampling errors. Conclusions should be reached only on the basis of these estimates.

(3) *Systematic Errors*. Of far greater concern to the journalistic researcher than the statistical errors just discussed, are those innumerable faults that can result from the slightest defect in the methodology of the experiment. Systematic errors result because our materials, apparatus, machines, or measuring devices are imperfect or lack the degree of precision needed. They may also be caused by the bungling or the carelessness of the observer. Systematic errors may be caused by:

- a. failure to control all factors during the experiment
- b. failure to keep methods standard and uniform
- c. failure to use methods equally applicable to all subjects
- d. lack of equivalence among subjects because of age, education, training, experience, economic status, place of residence, political affiliation, religion, race, or any other pertinent reason
- e. conditioning a subject's response, as may be done by telling him what the experiment is expected to show.

(4) *Accidental Errors*. It is impossible to eliminate all errors from any experiment, and those which cannot be prevented by foresight nor precisely compensated for after the experiment are known as accidental. If, as one example, a subject is engaged in reading a piece of advertising copy which he is to examine carefully for certain merchandising data and he suddenly remembers that he locked his family out of the house and has the only key to the door, his attention may be so distracted that he cannot complete the experiment. This distressing interruption of his thought

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would be an accidental error, one that neither the observer nor the subject could prevent. Accidental errors may become so numerous as to invalidate an experiment if the subject is interrupted often during the procedure.

(5) *Variable Errors*. A variable error is one which changes in magnitude from one experiment to another in the same series, or in various parts of the same experiment because certain circumstances have changed.

The most common way of eliminating variable errors is to give the same experiment to the same subjects more than once. The differences between the scores of the same subjects on successive repeatings of the experiment are the variable errors of that experiment. The allowance for variable errors is inversely proportional to the square root of the number of scores; that is, it becomes smaller as the number of cases becomes larger. This is, in fact, the chief reason why all samples in journalistic research should be as large as possible, for while all errors can never be eliminated, their significance will decrease as the sample grows.

Variable errors in experimental work may result from:

a. *Anticipation*. For example, the subject who is being exposed to a series of cards with messages printed in different type faces may anticipate all the words of a brief message from the first one. This is easily demonstrated by exposing a card with some familiar phrase on it such as "Haste Makes Waste," where the subject can guess the whole phrase from one word and the habitual association of words in the phrase.

b. *Fatigue*. In the experiment described above, it has been found that the average subject (college student) becomes tired of the experiment after reading about 25 cards.

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Fatigue of the olfactory sense is easier to produce than fatigue of the eyes; a subject soon becomes oblivious to a smell. He also becomes used to sounds rather quickly and provision must be made for rest periods or for varying the stimuli.

c. *Practice Effects.* In some kinds of experiments it is best to permit the subject to practice until further attempts do not increase his ability. An instance of this kind in journalistic research might be a test in writing an unusual type of headline, where the experimental factor was the story used as the basis for the headline rather than the form itself. In that case it would be wise to eliminate, by practice, the effect of the unfamiliar headline form.

In many instances, however, the effects of practice must be controlled in experimental research. It would completely invalidate a test of type legibility to permit the subject to see the cards several times, or for a long interval, before he read them officially. In testing the attractiveness of advertising illustrations, frequent or prolonged exposure would introduce so many other factors that the one of chief importance—attractiveness—would be lost. In comparing the learning rate of two classes in reporting who are studying newspaper style, both must be allowed exactly the same practice time, under the same conditions, or no opportunity for practice should be given to either of them. In any experiment, there is likely to be some effect of practice that cannot be eliminated, but it can be “cancelled out” by increasing the number of subjects.

An experiment may be repeated, using the same subjects and identical conditions, to eliminate the variable error inherent in the experiment. But if the process is repeated several times another kind of error will be introduced be-

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cause the subjects will perform some of their tasks better each time they do them. The force of habit is considerable. It must be eliminated so far as possible.

### RECENT RESEARCH IN JOURNALISM BY THE EXPERIMENTAL METHOD

The meagerness of experimental research by students of journalism is significantly emphasized by the small number of such studies that has been reported in the *Journalism Quarterly* in recent years. An inspection of 46 issues of the *Quarterly*, from 1930 to and including three issues in 1944 disclosed only four studies of importance that used the experimental method as the chief technique. These four studies were as follows:

Earl English, "A Study of the Readability of Four Newspaper Headline Types," in *Journalism Quarterly*, 21 (1944), 217-29.

R. E. Wolseley, "An Experiment in Training Student Reporters in Telephone Reporting," in *Journalism Quarterly*, 20 (1943), 239-40.

Miles A. Tinker, "Differences Among Newspaper Body Types in Readability," in *Journalism Quarterly*, 20 (1943), 152-55.

A. Geller, D. Kaplan and Harold D. Lasswell, "An Experimental Comparison of Four Ways of Coding Editorial Content," in *Journalism Quarterly*, 19 (1942), 362-70.

We must be cautious, however, in assuming that the total effort of journalistic investigators using the experimental method is accurately reflected in the works cited above. These four represent only those studies which their authors considered substantial enough and conclusive enough to warrant their submission to the editors of the *Quarterly*. There have been many, perhaps dozens, of

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smaller experimental studies performed in the schools of journalism and in newspaper, magazine and radio establishments that were not reported in any published article. Many of these were distinctly worthy projects and added something to the store of journalistic knowledge, although each of them individually may have been of slight extent.

Moreover, workers in fields such as psychology and more specifically in the psychology of advertising have contributed important studies of interest to journalism. These studies have appeared in publications such as the *Journal of Applied Psychology* and in full-length book form. Examples of the latter are:

M. Luckiesh and F. K. Moss, *Reading as a Visual Task* (New York, 1942).

D. G. Paterson and M. A. Tinker, *How to Make Type Readable* (New York, 1940).

## HOW THE EXPERIMENTAL METHOD CAN BE USED IN JOURNALISTIC RESEARCH

An ambitious program of research in various aspects of journalism can easily be suggested, whether one implies the experimental technique or not. But because so little has been done by this method, it seems clear that subjects for experimental studies in journalism are abundant. For convenience, we might classify the areas needing further investigation by scientific experiment in this manner:

(1) *Studies in Editorial Practices.* Explorations among present publication systems and devices to determine which are good, which are bad, and how they can be improved. In this category should be included all "controlled" reader-interest and reader-attitude studies of news and editorial content, and in presentation.

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(2) *Studies in Newspaper Mechanics.* Much experimental work remains to be done involving, for example, paper, ink and press work.

(3) *Studies of Readability.* Does anyone know the optimum reading conditions of our printed media? Although some good work has been done in this area in recent years, further studies in the field of type design, type sizes, and the make-up practices of publications in general are needed.

In addition, what is a readable style for newspapers or magazines? What is it, specifically, that makes one magazine easy for average readers and another too hard for them to comprehend? A growing literature in this field can profitably be read and followed up by journalistic investigators, perhaps by studies which seek to find a means for examining quantitatively the factors which contribute to reading difficulty.

(4) *Studies of Illustrations.* Experimentally, the field of pictures remains almost untouched. The techniques involved in the editing of pictures have doubtless been improved in recent years on the basis of virtually self-evident factors, but evaluations of these techniques by careful observation and measurement have been few indeed.

(5) *Studies in Advertising and Business Practices.* Investigations among the current advertising and management methods of publications to ascertain: (a) which are most productive financially; (b) which are most efficient; and (c) which are most justifiable as contributions to the public welfare.

(6) *Studies in the Methods of Teaching Journalism.* Almost every accepted practice in teaching journalism



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might well be challenged, dissected, tested, and thereby improved. As a beginning, let each teacher offer as suitable experimental material every technique he has embraced (a) because of authoritarian endorsement, or (b) as the easiest way to do it. There would be no lack of suitable studies.

(7) *Studies in Course Content.* Courses in Journalism, like Topsy, just "grewed." They are still growing, and in that fact lies the hope of their ultimate perfection. Experiment to determine the most essential subject matter will aid in directing this growth in a logical manner. As a start, someone might attempt to discover the essential attributes of a good course title.

(8) *Studies in the Responsibilities of the Profession to the People.* Journalism has been called a quasi-public institution, a public trust. It must, therefore, continuously account for its stewardship of that trust. What a wilderness lies beyond our present understanding of the journalist's duty to society.

(9) *Studies in Radio Journalism.* Those segments of radio which deal largely with news, commentaries, advertising, and station management seem logically to fall within the province of journalism, just as the dramatic aspects of radio belong in the school of speech. As yet, only a few schools of journalism have respectable offerings of radio courses, and none has a complete sequence. As radio courses increase, the opportunities for experimental research in radio techniques will increase and the need for such studies will become more insistent. In a youthful industry like radio, it is no sin to grope and try and reject and try again. Reasonably soon, however, the leading

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schools of journalism will substitute the findings of scientific experiment in radio techniques for the present conjecture and speculation and opinion.

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## Conclusion

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Some thirty years ago two types of journalism study were rather sharply differentiated.

The German system centered upon *Zeitungswissenschaft* and *Zeitungskunde*, the practitioners of which gathered information about the press, analyzed it, and attempted to compile a science of journalism. The scholars so engaged were objective observers and analysts, and the students who listened to their lectures were not necessarily planning to enter the practice of journalism. The German system prevailed generally in Europe, was imitated in Japan, and exerted some influence in the Americas.

In the United States, the universities had set up a more varied and complex system of journalism education. It approximated what later became known as a curriculum core, in which administrators were given a certain degree of control over the courses which made up the programs of students, in order that the liberal arts should be made to contribute to the preparation of these men and women for active journalistic careers. It also provided basic technical courses, many of which had strong liberal-arts implications. The teachers themselves had both professional and

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academic backgrounds, the students were preparing to enter the practice of journalism, and the connection between the schools and the press was intimate. This system prevailed throughout the United States, had made some slight beginnings in Latin America, and had been introduced into China.

However, the science, as differentiated from the art, of journalism has long been recognized in the United States as not only valid but of paramount importance. Journalism so considered is a part of sociology, of political science, of psychology. American scholars in many fields have busied themselves with investigations into the influence of the press and its proper position with respect to institutions, to law, to politics, to education, to business and industry, and to the mores generally. As graduate research developed in the schools of journalism, these new institutions have come to share more and more in the work of inquiry in their field. This volume is testimony to the vital and highly cognizant interest of the schools in the types and techniques of current research in journalism. Such activity, which has been marked recently by the organization, at several of the schools, of institutes and departments of research, indicates clearly that American schools of journalism are in 1949 more fully awake to the needs of press research than ever before. They are at least by way of becoming as fully identified with the *Zeitungswissenschaft* concept as with the programs of training for the practice of journalism.

It is also clear that there is a growing sense of responsibility in the schools for objective study, analysis, and evaluation of the day-to-day work of the press. More than any other institution, the schools are charged with care

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of the professional aspects and values of journalism. Since service is the major part of professionalism, this emphasizes their responsibility for dispassionate investigation of the services of the press to society. The intimate nature of the connection between the schools and the press has sometimes blinded teachers of journalism to the faults of newspapers; on the other hand, this very intimacy has sometimes led to a deep indignation against abuses. Certainly the researcher has no place for emotions on either side, but it should be obvious that a scholar trained in journalism has a great advantage in attacking and prosecuting investigations in his field because of his knowledge of the reasons which lie behind the procedures which produce newspapers, magazines, and newscasts.

If the schools are then launched upon an era of emphasis upon research into the phenomena of communications, they must be well equipped for it. The authors of the foregoing chapters have repeatedly insisted upon the need for adequate libraries, files of prints and records, computing and sorting machines, and such devices (sometimes especially built for a given inquiry) as are required for experiments psychological or engineering in nature.

Quite as necessary is the equipment in personnel. Although the general bases of ability in a director of research projects seem to be common sense, judgment, patience, and ingenuity, the techniques now in vogue in many departments of journalistic investigation require not only thorough training in an allied discipline but a command of statistics and such experimental methodology as has been evolved in psychology and physics. In fact, research in the social sciences has become a career, demanding wide and thorough preparation, as well as an initial aptitude.

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But the opportunity is challenging to a degree. In some of the older academic disciplines, research involves no little threshing of old straw. There is a vital immediacy about the journalistic problems that need investigating which provokes interest and even enthusiasm. "Pure" research has its place in the journalistic field, but most of our work is very directly "applied" research. That is, the results of most successful investigations in journalism are pertinent to the present scene and apt for immediate use.

Another advantage which is natural to research in journalism relates to its presentation. While some of our investigations result in reports designed for a highly specialized audience and therefore are not easy reading for the general public, most of them may be, and should be, presented in forceful, unpedantic, readable prose. The idea that a doctoral dissertation must be dull, sesquipedalian, and so recondite that it requires translation into good English to be comprehensible to Tom, Dick or Harry, is a superstition of which no journalist should be guilty. We should not renounce our birthright, which is fresh and effective English, for the pedant's mess of pottage.

Finally, a few words about finances will not be out of place. Universities cannot always be generous with research funds, and it is one thing to plan valid and significant projects and another to pay for them. Our criticism that the Commission on Freedom of the Press made an inadequate report brought the retort that the schools should themselves organize a proper investigation, but at this writing funds to support such a project have not been forthcoming. Yet it is probable that as the facilities, personnel, and prestige of the schools develop, research funds will come to them increasingly. There are signs of this at

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present. As this development takes place, it will be necessary for us to be constantly on guard to keep our researchers free of special influences and controls, lest the results should be mortgaged by the gift. The danger is a real one. Apparently there are commercial agencies which will bring in almost any report that is paid for, and the very word "research" tends to lose value. It will be obvious to the readers of the present volume that the objective of the contributors to it has been the clear indication of acceptable standards of research in journalism. Honesty in research and maintenance of valid standards and methods are, in practice, the same thing.



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